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No. 1

Editorial

THE HEALTH OF THE WORKER

THOSE of us who practise in the city are glad to see our merchant princes, captains of industry, railway magnates, and other supermen beginning to recognize that it pays to supervise their employees' health, both while at work and at home; also to minister to them when sick by providing nurses and doctors.

In a big manufacturing establishment not a thousand miles from Hamilton a medical and surgical staff of doctors and nurses on full time pay is employed, and care for 10,000 employees and their families, doing all the medical, surgical and obstetrical work necessary. The company pays all salaries, and for all supplies and equipment.

The worker is coming to his own by degrees. One has only to look back 25 years to note how much better they are looked after now than then.

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Labor everywhere since the war is very restive. In some places its enthusiasts would like to try out "direct action"—observable notably in Winnipeg and in the old country. They will win their cause better by using the constitutional ballot. The efforts of the manual laborers for a greater degree of leisure and comfort are in the main justifiable, but a proportion of their number are inclined to take high-handed means. The capitalistic ranks see what is coming and are tempering the wind to the shorn lamb. All attempts of the plutocracy and of the State to ameliorate the lot of poor workmen by helping to care for their health as described above, by providing better housing (and heaven knows they need it), by child welfare clinics, school inspection and kindred means, will tend to keep the peace and make the world a better and happier one.

Improvement has followed the get-together policy—in a spirit of goodwill and not one of belligerency.

Many of the laboring class are poor managers: the mother does not know how to keep house properly and is unable to buy supplies of food and clothing to advantage. They buy often unnecessary things and things they cannot afford.

A city physician was called to a workman's home to treat him for lumbago. His work was that of a brickmaker. Being up in years and feeling his job too heavy, he went to work for a manufacturing concern—as a strike-breaker. Not liking to be called a scab

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and through the influence of the emissaries of the union he quit work. Returning to his former work after two days he developed the lumbago. In a short time he was convalescing. The doctor, at his last visit, said to him, "Mr. G——, your funds are no doubt low; my fee will be only \$—," naming a small amount. The wife, who stood near, burst into tears, with "Doctor, we haven't a dollar in the house to buy bread for the family." The medico automatically dived into his pocket, handed the mother a bill and told her to go out and buy some bread. He bade them good-by and passed from the dining-room (where the colloquy took place), through the opened folding doors into the little parlor, where, to his astonished eyes stood an expensive victrola—something he and his wife had contemplated buying as soon as they felt they could afford it!

Sequel: The doctor called up the manufacturing establishment and got the man taken on again, and within a few months the happy-faced ex-patient called at the doctor's office, paid the fee and returned the money given his wife.

THE PENALTY OF FAME

Some of us practitioners in Canada have the same sort of fight as our brethren across the pond in our modest endeavors to keep in the background and out of the eye of the public. We can sincerely sympathize with our erudite transatlantic confrère,

Leonard Williams, when he writes so diabolically clever to the *Medical Press* as follows:—

Sir,—*Qui s'excuse s'accuse*, so that what follows is not to be taken as in any sense an apologia, still less an apology; it is a contribution to the psychology of the pressman so amusingly referred to by Professor Leonard Hill in your last issue.

Some months ago, the Editor of an evening paper asked me if I would write an article initiating the lay public into the mysteries of vitamines, a subject on which he read that I had recently been speaking at a medical gathering. I wrote the article, and was told that it would appear on a certain Monday. On opening the paper I was horrified to find a portrait of myself with some introductory italicized remarks intended to be complimentary. But my surprise was even more than my horror, for though I have frequently been asked for a portrait of myself for publication, I have always steadfastly and even vigorously declined it. I thereupon rang up a friend of mine whom I knew to be connected with the paper in question and asked him to find out how the devil the management had succeeded in circumventing me. The answer which I received seemed to thicken the plot. It was to the effect that the portrait had been obtained from me! When the mystery came to be unravelled the solution worked out as follows: On the Saturday before the article appeared I was away from home; in the afternoon my responsible servants were out. It was therefore a young and inexperienced maid who opened the door

to an insinuating gentleman who said he had come "for the doctor's portrait." The maid knew nothing. The insinuating gentleman then explained that the whole British Empire would certainly go straight to the devil, and antichrist reign on earth unless that portrait was forthcoming within the hour. Terrified at such an awful prospect, the maid then searched the house and discovered the portrait which was to save civilization from the Bolshevik.

My letter to the management complaining that this was hardly cricket brought me a more than sufficient apology; I bowed and the incident closed.

Last week I wrote an article for a morning paper and that accursed portrait appeared at its head! This time I believe I have killed it, and if press promises are worth anything it will never appear again. And the worst of this *mauvaise plaisanterie* is that the portrait was a caricature!

Shouldn't our Canadian men of eminence in the profession, when their photos appear in the daily papers, make a protest as strong as Brother Williams'?

Should physicians-in-chief allow their names to be published in connection with reports of rare diseases they are treating?

Should our cancer specialists allow their patients to give columns of free advertising to them?

Another thing.

In a preceding issue we have referred to the

danger our city specialists are in when a special train is made up and they are whirled at the rate of 70 miles an hour through sleepy villages, slow-going towns, and quiet country-sides to perform some life-saving operation. Such events happen so seldom that they must be chronicled in all the local weeklies *en route*, and make good stories for wiring from the patient's home town to the metropolitan dailies.

The Ontario Medical Association might well ask its Committee on Ethics to inquire how these papers can be muzzled, and our beloved specialists protected from so much undue publicity.

Meantime they must suffer in silence; for such is the penalty of fame.

A VALUED ADDITION TO OUR EDITORIAL STAFF

THE editorial staff of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY have the great pleasure of welcoming to their number Mr. Irving H. Cameron, Emeritus Professor of Surgery in the University of Toronto. There are few better known in the surgical world than Mr. Cameron—a name among the Canadian profession both honored and beloved. Mr. Cameron will be in charge of the Department of Principles of Surgery and Surgical Pathology.

Canadian Journal of Medicine and Surgery

Toronto

Canada

Editorial Staff

The Principles of Surgery and Surgical Pathology

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Address all communications to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

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Original Contribution

CHRONIC TONSILLAR INFECTIONS*

BY H. B. ANDERSON, M.D., R. W. MANN, M.D., and
N. C. SHARPE, M.D.

THE great importance of diseased tonsils as foci whence infection, especially by streptococci, gains entrance to produce various systemic diseases, has been well established during recent years. Still more recent investigations of the virulent type of pneumonia, often accompanied by empyema, following measles and influenza, have shown that hemolytic and to some extent, other types of streptococci, taking advantage of the lowered systemic resistance due to the primary disease, have been largely responsible for these serious complications and the appalling mortality which resulted from them.

Numerous epidemics of severe tonsillitis have been traced to milk, contaminated by hemolytic streptococci from the udders of cows affected by garget, or milkmen suffering from tonsillar infection. Even apparently wholesome, certified milk has frequently been shown to contain hemolytic or other varieties of this organism.

The extreme facility with which streptococcal infections are carried from patient to patient in hospitals and barracks, the greater liability to pneumonia and other serious complications in measles and influenza among streptococcus carriers as compared with non-carriers, and the importance of segregating the former, are matters upon which there is marked unanimity of authoritative opinion.

*Read before the American Therapeutic Society at its twenty-first annual meeting, held in Philadelphia, May 7 and 8, 1920.

Investigation of the bacteriology of the tonsils by many competent authorities has shown that commonly streptococci are found on examination of excised tonsils or materials expressed from the crypts, so much so that most investigators state that these organisms are normal inhabitants. That they are dangerous tenants, under conditions favorable to infection, is generally admitted. The degree of virulency of the three types—hemolytic, viridans, and non-hemolytic, is in the order named—the exogenous strains from milk, contact, and droplet infection being considered more virulent than the so-called normal inhabitants of the crypts.

The *Streptococcus viridans* and other non-hemolytic varieties, are more widely distributed, represent more heterogeneous groups than the hemolytic as determined by immunity reactions, and produce more local, chronic, and milder lesions. They do not call forth an active local or systemic resistance from the body's defensive mechanisms in the way of leucocytic exudate or antibodies and therefore produce infections less easily eradicated by treatment.

It is generally admitted that laboratory tests of the morphologic, cultural, and biologic characteristics of these organisms are insufficient to determine the degree of pathogenicity of a given strain. To establish in a given case whether we are dealing with a harmless saprophyte or an organism capable of producing or actually accounting for systemic symptoms, however, is a matter of the greatest practical importance to the clinician, and I believe this may most readily be done by considering the laboratory and clinical findings side by side. If these organisms are found in the tonsil, unassociated with local or systemic evidences of disease, though one would recognize certain pathogenic possibilities, he would not attribute importance to them under such circumstances, unless as possible carriers of infection to others. If, on the other hand, they are associated with definite local and systemic evidences of disease, is not one warranted, on clinical grounds, in incriminating them as the probable cause of trouble?

It will be noted that investigations on the tonsils carried out so far have been largely in *group* cases, occurring in military

camp, in hospitals, or in connection with local epidemic outbreaks, with the consequent liability that the infection has been carried from patient to patient, or to those exposed to such influences as a contaminated milk supply. The cases coming under the observation of throat specialists are usually those that have local symptoms directing them, or have been referred because they are suspected of having throat trouble.

The clinician, dealing with private patients, on the other hand, comes in contact with more isolated, rather than group cases, and has to study not only *local*, but the *systemic* evidences of infection, and has usually an opportunity to follow his cases over a longer period, noting the ultimate results of operative or other treatment, and thus is in a favorable position to determine many of the unsettled points regarding tonsillar infection. It is his duty in a given case to decide whether an active infection in the tonsil exists, capable of producing attendant systemic symptoms, and as he must advise the patient regarding the general plan of treatment to be followed, the question of the tonsils necessarily comes under his consideration.

The clinical evidences of disease in a patient, local and general, represent the *reaction* of the tissues to the infecting organisms, and therefore should afford the best criterion of their activity and virulency.

In order to determine the condition of the tonsils and the bacteriologic findings more generally in the population, during the past fifteen months, in association with my assistants, Dr. R. W. Mann and Dr. N. C. Sharpe, the writer (Anderson) has made routine examinations of the throats of cases in office practice, comprising patients widely distributed throughout the Province of Ontario, and therefore representative of conditions more generally obtaining among the subacute and chronic, *ambulatory* sick in the community as a whole. The method of investigation in each case has included observations covering the following points:

(a) A careful history of previous attacks of tonsillitis, quinsy or sore throat.

(b) A history of any systemic disease, such as is known may arise from focal infection of the tonsils.

(c) Evidences of coincident infection of the teeth, sinuses, nasal cavities, etc.

(d) The presence of hypersecretion of the throat, pharyngitis, and the condition of the lingual and pharyngeal tonsils.

(e) The presence of redness, granular appearance, or thickening of the anterior pillars and adjacent soft palate.

(f) Noting the size and color of the tonsils, fissured, ragged, or cryptic conditions, adhesions or sealing over of the mouths of the crypts with scar tissues, interference with drainage.

(g) Firm pressure backwards upon the anterior pillars so as to extrude the tonsils, noting evidences of atrophy, fibrosis, edema, adhesions to the pillars and peritonsillar tissues, areas of inflammation in the substance of the tonsil; caseous or purulent material expressed from the crypts, peritonsillar tissues, or supratonsillar fossa, and the odor of the exudate.

(h) The presence, after operation, of scarred remains of the tonsil, tags, evidences of trauma, residual inflammation in the tonsillar fossae or the pharynx, etc.

(i) Enlargement or tenderness of cervical lymphodes.

(j) Bacteriological examination of swabs from the crypts or the cheesy or purulent exudate, expressed therefrom.

The bacteriological examination was as follows: The swabs from the tonsil crypts were streaked on glucose-human blood-agar and incubated. The plates were examined for hemolysis, twenty-four to forty-eight hours later. Stained smears were examined to identify the organisms. In all, 937 patients were carefully examined by the above methods, and of these 623, or 66 per cent., showed definite clinical evidences of tonsillar infection.

In this series, *Streptococcus viridans* was found in 260 of the 937 cases, or 27.8 per cent., though there was a marked seasonal variation, being lowest in the autumn—viz., 16 per cent. in September, 4.2 per cent. in October and 5.2 per cent. in November, rising rapidly to 44 per cent. in December, 65.3 per cent. in January, and 75 per cent. in February. The clinical

evidences of tonsillar infection also showed a great increase during these months, and it was also believed that *Streptococcus viridans* was especially associated with a more markedly edematous inflammation, dark red in color, rather than with distinctly cryptic and purulent types, so much so that we were usually enabled to foretell this type of infection from the local appearances presented. Other non-hemolytic forms were second in order of frequency, being found in 137 cases, or 15 per cent., the percentage being lowest in the periods when the other forms were most frequent.

The *Staphylococcus aureus* was found in 114 of the 937 cases, or 12 per cent. In November, 1919, it was found in 42 per cent. of 47 cases examined. This is relatively a much higher percentage than most observers have reported.

The hemolytic streptococcus was found in 79 cases, or about 0.9 per cent., being much more frequent in the autumn, winter, and spring months than in the summer—rising at times to 25 per cent. of the cases examined during the former periods.

The largest percentage of the most pathogenic forms, therefore, correspond to the colder weather, indoor life, and the period when pneumonia, rheumatism, etc., are most prevalent. Two or more forms not infrequently were isolated from the same case. Less frequently bacteriological findings were diphtheroid bacilli, pneumococci, *Micrococcus catarrhalis*, etc.

Considering together the results of our clinical and bacteriologic investigations, they lead to the conclusion that a large percentage of the adult population of the class seeking private consultation present definite evidences of tonsillar disease, associated with the presence of pathogenic organisms, producing or capable of producing, under conditions favorable to general infection, more or less serious systemic symptoms. In our experience in the chronically ill, typically healthy tonsils are the exception, rather than the rule. In fact, it would appear that more or less evidence of active tonsillar infection is about as common in this class as recent investigations have shown to be the case with oral infection. So often does one find in patients chronically ill evidences of definite infection in the tonsils that one might almost consider it as a concomitant of

the normal process of atrophy, or that a chronic infection of low intensity is designed to stimulate a systemic response which renders the subject refractory to more serious attacks. The latter viewpoint has been elaborated in an interesting manner.

It seems to us, however, that we may too readily give a certificate of character as normal inhabitants to potentially dangerous bacterial invaders of the tonsils.

There are certain conditions to which the general population is exposed at the present time, which predispose to infection of the tonsils and help to explain its frequency. Those who have studied the condition are aware of the difficulty of ridding the tonsils of infection, once it has been well established (Billings). Their exposure not only to pathogenic bacteria in food and drink, but to local irritation, the low vitality of the tissue itself, the long, sinuous crypts, so readily occluded so as to interfere with drainage—all are favorable to continuance of infection.

The common diseases of childhood—scarlet fever, measles, and diphtheria—are practically always associated with throat involvement, due to streptococci, and the same may be said of postnasal and sinus disease draining into the nasopharynx. The oral infection with which *Streptococcus viridans* is constantly associated, not only in the neglected mouths of the poor, but in a more serious form in the mechanically maintained infections so commonly found among the well-to-do, are foci whence infection extends to the surrounding tissues, including the tonsils.

The kissing of children by adults with infected mouths is another obvious means of transmission of infection to the tonsils. Incomplete operations in children, leaving stumps and tags and the producing of trauma and scar tissue, are frequent causes for the persistence of chronic infection in adult life. Even after complete enucleation, there is often an hypertrophy of lymphoid remains in the nasopharynx, that is the seat of recurrent infection.

Whether the infected tonsils produce symptoms or not, apart from the degree of systemic resistance, is often a question of drainage. The action of the palatoglossus and palatopharyngeus muscles, in mechanically compressing the tonsils during deglutition and the abundant secretion of mucus to destroy bacteria and wash out the crypts, are among the means

which nature has provided to ward off infection, but where previous inflammation has occluded the crypts, sealed over their openings by scar tissue, or produced adhesions, these means become less effective. Thus the small, concealed, atrophic, adherent tonsils and stumps and tags left after incomplete operation, which may present little evidence of disease on superficial examination, are commonly the seat of the most serious type of infection. The atrophic tonsil itself is often evidence of long continued infection, and, as Carmichael has stated, tonsils having undergone repeated attacks of inflammation, with resulting fibrosis and loss of nearly all the glandular tissue, finally offer no resistance to pathogenic bacteria. We wish to protest against the frequent assumption as unwarranted on pathological grounds, that a given tonsillar infection is clinically unimportant because the amount of tissue involved is not extensive. Obviously the virulence of the infecting organism, the patient's resistance and the question of drainage may be of greater moment.

Often very firm and long continued pressure on the pillars is necessary in order to express the pus sealed in by firm adhesions. Infection may often be demonstrated by this means which would be overlooked by retraction of the pillars or bringing the tonsils into view by a tenaculum. Direct palpation of the tonsils is a procedure too often neglected in routine examination for evidences of infection. These are the cases where chronic enlargement and tenderness of the upper cervical lymphnodes is of most clinical significance though many cases of definite tonsillar infection do not show lymphnode enlargement, and it must be remembered that all parts of the pharyngeal ring do not drain into glands readily accessible to palpation. At times, patients gave a history of recurrent attacks of tonsillitis, quinsy or sore throat, indicative of persistent infection, but in many cases where investigation has revealed definite evidence of disease, the patient had complained of no local symptoms. The throat of inhalers of cigarette smoke and the so-called "smoker's throat," usually showed clinical evidence of infected tonsils and the throats of soldiers seriously exposed to the effects of chlor-

ine and other irritant gases, commonly showed chronic tonsillar infection.

The persistence of evidences of residual infection about the pillars, in the tonsillar fossae and those of the pharynx, after enucleation, is very common, suggesting that at times we take too mechanical a view of the possibilities of removing an infection which has extended more widely into the surrounding tissues or adjacent lymphnodes or produced systemic disease. This is especially the case where a coincident oral or sinus infection has not been cleared up as a preliminary to operation, when the general health is below par, or when some systemic disease, such as diabetes, gout, or acid intoxication, or digestive disease exists. These factors help to explain some of the disappointing results following operation.

The rapidity with which marked improvement in the condition of the tonsils follows when a diabetic patient has become sugar-free, as well as the rapid reduction in carbohydrate tolerance coincident with an acute exacerbation of a tonsillar infection, emphasize the importance of constitutional conditions which reduce systemic resistance.

The presence of certain symptoms of systemic disease may be an important indication of the activity of a local tonsillar infection in a given case. In 574 cases in our series, the patients presented the following associated conditions:

1. Rheumatic group, including arthritis, lumbago, sciatic and other pains, neuritis, etc.—166 cases, or 27.1 per cent.
2. Cardiovascular, including valvular disease, hypertension, myocardial disease, angina pectoris—115 cases, or 20 per cent.
3. Goitre (simple, 80; exophthalmic, 20)—100 cases, or 17.4 per cent.
4. Gastrointestinal, including appendicitis, gastric and duodenal ulcer, hyperacidity, gastric atony, cholecystitis and gallstone disease, unspecified indigestion—116 cases, or 20 per cent.
5. Diabetes and glycosuria—28 cases, or 4 per cent.
6. Respiratory diseases, including bronchitis, asthma and pleurisy—30 cases, or 5.4 per cent.

Oral sepsis was noted in 320 cases or 55 per cent., but if we included the edentulous, in whom previous serious infection obviously had existed, the percentage would have been higher. It may further be stated that healthy tonsils are rarely if ever found where the mouth is seriously infected.

There is a notable lack of harmony among observers as to the relative frequency of the different pyogenic organisms found in the tonsils, apparently depending upon the bacteriological technique employed, whether the examination has been of excised tonsils or of swabs from the surface or of the crypts, whether during epidemics of tonsillitis, measles or influenza, etc., whether among group cases as in barracks, hospitals and schools, or among more widely scattered individuals, and according to the season of the year. A point of great importance, moreover, which has not received the attention it obviously deserves, is whether the cultures have been made from healthy or clinically diseased tonsils, as has been in the case of the epidemic diseases before mentioned, and in the statistics of Smillie, Tongs and others. Conclusions regarding the normal flora can obviously not be drawn from the study of diseased tonsils.

These factors offer a reasonable explanation of the widely divergent results reported by competent investigators as to the frequency with which *Streptococcus hemolyticus* is found, varying from 1 per cent., as reported by Smillie, to 100 per cent. reported by Davis.

If definite tonsillar infection is as common as our investigations have led us to conclude, the importance of our endeavoring to control, as far as possible, the causes producing it, is obvious; but some of these are so bound up with inevitable social conditions that the problem is a difficult one. Others, however, are more possible of control, as milk supply, oral and sinus infection, incomplete operations, unnecessary trauma, etc.

The maintenance of the highest degree of general health, the treatment of constitutional conditions which lower resistance, the value of alkalis and similar means, one need not discuss. Opinion as to the ineffectiveness of vaccines is very general, and local applications, such as iodine, argyrol, chlorine prepara-

tions, etc., are equally disappointing as means of clearing up a chronic infection. Irritants should be avoided, and the best results apparently are obtained from bland, alkaline remedies, or physiological saline solutions. Preliminary attention to oral and other foci of infection certainly would give non-operative measures a better chance, and the fact that improvement in the condition of the tonsils in the summer months with the lesser frequency of pathogenic organisms in cultures, suggests a tendency to spontaneous cure under favorable conditions.

The use of the cautery and caustic drugs, by increasing the amount of scar tissue and thus interfering with drainage, appears difficult to justify on pathological grounds. These, like partial removal of the diseased tonsils, may be followed by temporary improvements, but often the ultimate results are worse than the original condition. Complete enucleation, with the least possible trauma, apparently gives the best ultimate results. The removal of oral, sinus, nasal and other local foci of infection is a prerequisite to successful operative treatment. The continuance of general and local treatment in order to get rid of residual infection is too often overlooked.

The decision as to the necessity for operation must be made in the individual case after careful consideration of the local and systemic evidences of infection, including bacteriological examination, and in regard to this there appears in practice a marked divergence of opinion. The nature of the infection and the question of drainage appear to be all-important, much more than the size or outward appearance of the tonsil. Moreover, conclusions as to the actual size of the tonsils, based on their prominence on throat examination, are known to be erroneous, since the adherent tonsil, when concealed in a deep fossa or behind a prominent plica, is quite often much larger than outward appearances suggest.

Different attitudes regarding operation are illustrated by a case which I saw a few days ago in which a prominent throat specialist, after examination, said the tonsils were infected, but not sufficiently so to call for enucleation.

The patient was a vigorous, well-developed woman, a vocal-

ist, aged 37, and her symptoms, consisting of recurrent attacks of laryngitis and bronchitis, pains about the angle of the jaw and in the neck, for which she had had recourse to osteopathic treatment, rhonchi in the apex of the right lung, producing an uncomfortable sensation on breathing, had followed an attack of tonsillitis three years ago. Radiographic examination of the chest was negative, she had no expectoration, and no fever. The tonsils were small, and the pillars red. They were healthy looking on a superficial examination, but were so adherent that one could not extrude them by firm pressure. A small amount of caseopurulent matter was obtained after prolonged pressure and culture from this showed *Staphylococcus aureus* and *Streptococcus viridans*. The upper cervical glands were slightly enlarged and tender.

This is cited as illustrating a type of case in which the clinical findings, we believe, offer an indication for enucleation as the proper method of treatment, but in which the local evidences are so unobtrusive, that the opinion is frequently given by the specialist that there is not sufficient infection to warrant it—a view which we do not think is in accord with a proper understanding of the pathological condition or the clinical findings. In dealing with infection, the virulence of the organisms, the local and systemic resistance of the patient, and the question of drainage are more important than the extent of the area involved.

In conclusion, we wish to say that our object has been to bring up numerous practical considerations which confront the clinician, with a view to eliciting the opinions and practice of the members of this Society in dealing with them. We have dealt with the question from the standpoint of the clinician rather than of the throat specialist, believing that from this angle the whole question may be studied in its widest relations.

184 Bloor Street East, Toronto.



Society Proceedings

THE ONTARIO MEDICAL ASSOCIATION

The Secretary of this Association has circularized the profession with a view (1) to securing a subscription of ten dollars to be spent on the work of the Central Office of the Association under the direction of a special committee to be appointed by the Committee on General Purposes; (2) to securing the names of men considered eligible and qualified as territorial representatives of the eighteen districts of the Association, to the Council of the College of Physicians and Surgeons.

The officers of the Association feel that it is a duty each physician owes to himself and to the profession to give these matters honest consideration. The Association, with a profound sense of duty, has decided to take an active interest in the elections to the Council of the College with a view to assisting the profession in selecting territorial representatives who are most fitted for the duties and responsibilities of the governing body of the profession in Ontario.

Accompanying the appeal the circular goes on to say:

WORTHY FACTS FOR PHYSICIANS.

You will probably readily admit that the medical profession stands a very poor last in the ranks of all organized bodies—professional, commercial and labor. No class of men need organization more and none can more readily afford it.

Medical legislation in Ontario is at present precariously hazardous. The various cults and irregulars stand a very good chance of recognition and legislation.

Various aspects of State medicine now in vogue or being inaugurated demand the urgent attention of a united medical profession.

Medical fees require revision and Province-wide collaboration.

Hundreds of individual grievances have been directed at the workings of the Workmen's Compensation Board, but no unified action has been taken by the profession.

Many men are appealing for revision of insurance examination fees, but the corporate body is lacking in numerical strength to make such demands with any degree of success.

The profession is calling from all corners for post-graduate work, but their voices are not heard as one unified call which could command attention and some definite action.

Over 3,200 practitioners in Ontario are heterogeneously and largely non-effectively organized because the majority of this number, on account of apathy, indifference, self-contentedness, jealousy or selfishness, have been willing to plod along as individuals rather than pool their mental resources and strength. Some few hundreds are earnestly striving to carry on the work of the thousands.

Now JUST WHERE DO YOU FIT IN?

Be honest with yourself in the matter. If you are not a member of the Ontario Medical Association, are not the foregoing reasons sufficiently sane and sound to prove to you your duty to yourself and to your fellows.

And there are a hundred more reasons why every reputable practitioner in Ontario should be a member of the Provincial Association.

Throw off lethargy and indifference! Transform your neighboring practitioner from opposition to colleague and cultivate the spirit of cohesion! Forget petty differences of opinion and join the Association NOW.

Make up your mind to attend the next annual meeting and air your grievances. If the Association doesn't measure up to your ideals, help to make it do so.

The annual fee is two dollars. Sign the enclosed application card and return it to-day, thus becoming an active supporter of the movement to advance the interests of the profession and the public. (If you are already a member of the Association,

please use this card to obtain a new member.) All remittances accompanying applications will be credited for the year 1921, the official receipt being forwarded by the Treasurer.

Just a word in conclusion. These are momentous days and we must be prepared to stand together. Will you not assure us of active co-operation in our endeavors to carry out your interests.

The Association proposes to incorporate under the Ontario Companies Act.

SPECIAL MEETING OF THE ONTARIO MEDICAL ASSOCIATION*

A SPECIAL meeting of the Ontario Medical Association was held in Toronto on Tuesday and Wednesday, December 7th and 8th, 1920, for the following purposes:—

1. Accepting the Articles of Incorporation of the Ontario Medical Association. 2. Consideration of and taking the necessary action on the report of the Executive Committee. 3. Consideration of and taking the necessary action on the report of the Committee on Venereal Diseases. 4. Consideration of and taking the necessary action on the report of the Committee on Education. 5. Consideration and taking the necessary action on the report of the Committee on Inter-Relations of the Medical Profession and the Public. 6. Consideration of and taking the necessary action on the question of increasing the Annual Fee of the Association.

In conjunction with the special meeting, all members of the profession in Ontario were invited to attend a District Medical Meeting of the Counties of Peel, York, Ontario and Simcoe, held under the auspices of the Academy of Medicine, Toronto, and presided over by Dr. F. W. Marlow, Counsellor for District Number Five of the Ontario Medical Association.

The following comprised the programme:

TUESDAY, DECEMBER 7TH.

2.00 p.m.—Meeting of the Committee on General Purposes at the Military Institute, Toronto.

* We regret our inability, owing to date of going to press, to publish an account of this meeting, which was both interesting and instructive.

At 7.00 p.m. dinner was served at the place of meeting, and at 8.00 p.m., those attending the meeting were the guests of the Academy of Medicine, Toronto, at their stated meeting, in the Mining Building, University of Toronto, when an address by Dr. James T. Case, of Battle Creek, Mich., was delivered, the subject being "An X-Ray Study of Acute and Chronic Intestinal Obstruction."

WEDNESDAY, DECEMBER 8TH.

At 10.00 a.m. a general business session of the Ontario Medical Association was held in the Auditorium of the Central Technical School, Harbord and Lippincott Streets, Toronto.

After luncheon at 1 o'clock, there was a meeting at 2.00 p.m. at the Central Technical School, when the District Medical Meeting of the Counties of Peel, York, Ontario and Simcoe, was held under the auspices of the Academy of Medicine, Toronto.

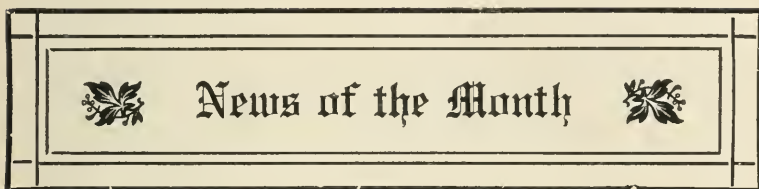
NEW APPOINTMENTS TO THE UNIVERSITY OF TORONTO STAFF

The following appointments have been made to the staff of the University of Toronto by the Board of Governors for 1920-21:

Faculty of Medicine (Demonstrators, Clinical Surgery)—Drs. M. H. V. Cameron, F. A. Cleland, R. E. Gaby, Oliver Mabee, J. A. McCollum, A. S. Moorehead, A. H. Perfect, J. A. Roberts, D. E. Robertson, N. S. Shenstone, G. E. Wilson, A. B. Wright.

Assistants (Clinical Surgery)—Drs. H. W. Baker, H. E. Clutterbuck, G. M. Dale, R. R. Graham, C. H. Hair, G. C. McIntyre, B. Z. Milner, C. B. Parker, Robin Pearce, L. B. Robertson.

Temporary Assistants (Clinical Surgery)—Drs. E. C. Beer, W. A. Costain, C. H. Gilmour, R. I. Harris, H. Harrison, A. S. Lawson, A. B. Lemesurier, J. C. McClelland, R. A. McComb, T. A. Robinson, E. E. Shouldice, J. S. Simpson, R. H. Thomas, F. E. Watts, J. H. Wood.



TORONTO GIVEN SHARE OF FUND OF \$5,000,000

THE Rockefeller Foundation on November 28th, announced the preliminary apportionment of \$3,000,000 in aid of medical education in Canada out of the \$5,000,000 previously set aside for this purpose.

The appropriations now made are of two classes: First, contributions toward increasing the permanent resources in buildings and endowment of schools already well established; second, contributions to annual income of institutions which are undergoing reorganization. These allotments have been made:

McGill University, Montreal	\$1,000,000
University of Toronto	1,000,000
Dalhousie University, Halifax	500,000
University of Manitoba, Winnipeg	500,000

Schools in process of reorganization to receive aid from the income of the \$2,000,000 reserve are:

University of Alberta, Edmonton, for the year 1920-21, \$25,000; Universite de Montreal, 1920-21, \$25,000.

Applications from these schools for further aid will be considered.

Of the \$2,000,000 reserved for future distribution the income is to be used toward current expenses, fellowships and other forms of aid to medical education.

In each case the apportionments now announced represent contributions to plans of development worked out by the institutions concerned, which involve substantial sums from other sources.

"We greatly appreciate the gift. It will assist us in extending and carrying out the work of the Medical Faculty. It

will help greatly in the development of the Medical College. Of course, the sum was given for this purpose. It must be used to extend the Faculty of Medicine, to increase the faculty and not in buildings. It does not mean that the University will be able to use the gift to relieve itself of any burden, but must be used for extension of the work," said Sir Robert Falconer, President of the University of Toronto, in commenting on the announcement of the sum allotted to Toronto.

Sir Robert said that the Rockefeller Foundation had conferred with the Board of Governors in regard to the gift. There were conditions laid down and certain things which the University was required to do. While the Government must consent, he did not think that there would be any objection to follow out the wishes of the Foundation.

The amount of the sum given to Toronto had been known to the Governors for some time, although this was the first official announcement.

The sum coming from the Rockefeller Foundation will not be available for increasing salaries, Sir Robert Falconer also stated. The money may be used for increasing the staff, but the increasing of salaries must be looked after by the Board of Governors. It may, however, see some of the staff receive new appointments under the fund with better salary.

DEPARTMENT OF HEALTH DESIRES DECLARATION

THE Federal Department of Health some weeks ago mailed to all physicians, veterinary surgeons, dentists and druggists in Canada, form No. 6, on which to make the declaration as provided under the Act, showing that they are engaged in the sale or distribution of narcotics. Very heavy penalties are provided under the Act for neglecting or refusing to furnish the declaration in question: a fine of not less than \$200.00 and costs, and not more than \$1,000.00 and costs, or to a term of imprisonment of one year, or to both fine and imprisonment, being the penalties specified for non-compliance with the regulations. As a number of physicians, veterinary surgeons,

dentists and druggists have not so far sent in the required declaration, the Department has advised the editor that unless this declaration is received within a reasonable period, the law will be enforced and penalties levied upon all delinquents. It should be noted that all physicians who obtain narcotics in any quantity to administer directly to their patients, are considered to be engaged in the distribution of these drugs: likewise all dentists and veterinary surgeons who obtain supplies of these drugs for use in connection with their practice, are considered to be engaged in the distribution of narcotics, and it is, therefore, necessary for them to make the declaration as required under the Act as amended at the last session of Parliament. Any physician, veterinary surgeon, dentist or druggist who may have mislaid the forms sent by the Department, may upon application to the Department of Health at Ottawa, obtain further copies in order that the necessary declaration may be filed. The Department of Health does not wish to work any hardship in connection with the filing of these declarations, but in order that the law, as embodied in the Act, be conformed with, any physician, veterinary surgeon, dentist or druggist failing to fill in the forms of declaration within a reasonable time, will be dealt with according to the terms set forth in the Act.

DR. BOWIE KILLED BY FALL

LIEUT.-COL. ROBT. A. BOWIE, one Brockville's leading physicians, was killed at St. Vincent de Paul Hospital on November 26th, by falling down the elevator shaft. He had been talking to a patient in the corridor and thought the elevator was behind him, but it had gone on up, and he stepped into space, falling fifteen feet.

His wife, who was Miss Pattullo, daughter of Mr. G. R. Pattullo, Woodstock, survives, with three daughters.

Dr. Robert Arthur Bowie served overseas throughout the war, and was in charge of various hospitals in England and France. He was fifty years of age and in his younger days he was a noted football player.

DEATH OF DR. J. B. HALL

DR. JOHN B. HALL, one of the best-known homeopathic physicians in Toronto, and possibly in Canada, passed away at the family residence, Jarvis and Carlton streets, shortly before noon on November 26. He was in his 84th year, and was able to attend to patients in his office up to a week before.

Two years ago Dr. Hall contracted influenza, and never fully recovered, his health steadily declining since. He is survived by his widow, formerly Miss Martha Coon, of Cleveland; two sons, and two daughters.

The late Dr. Hall had a very extensive practice. He was noted for his success in treating the ailments of children. He led an active life.

DR. W. I. DEFRIES, 30 Bloor Street West, announces that his practice will now be entirely confined to the administration of anesthetics.

THE INNER LIFE

BY PRICE-BROWN.

You say that we are blind. So be it.
Yet out of the darkness of night
Comes forth the light of day.

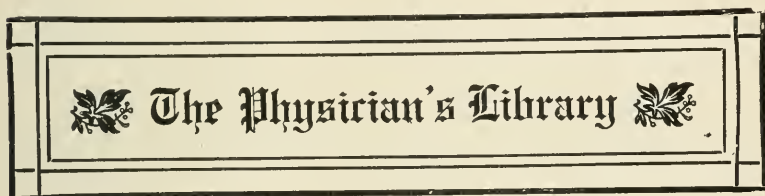
With you, things seen are like phantoms of the hour,
Chasing each other in quick succession,
Through the long years of the labyrinth of life.

With us, visions of the past are adamant,
Fixed indelibly in memory;
Their lines of beauty growing ever clearer,
While faces of loved ones remain,
Never to be forgotten.

So we thank God that we have seen.

TORONTO GARRISON MESS ORGANIZED BY DOCTORS

MEDICAL doctors who served overseas with the C. A. M. C. have organized the Toronto Garrison Mess, C.A.M.C., and are now arranging plans for the future activities of the organization, according to an announcement issued November 30th, from military headquarters. The officers for the ensuing year are: President, Col. D. W. McPherson, C.M.G.; Vice-President, Lieut.-Col. C. A. Warren; Secretary-Treasurer, Lieut-Col. T. H. McKillop, D.S.O.; Executive Committee—Major R. H. Thomas, M.C., and Major S. J. N. Magwood, M.C.



The Life of Pasteur. By RENÉ VALLERY-RADOT. Translated from the French by Mrs. R. L. Devonshire, with an introduction by Sir William Osler. London: Constable & Company, Ltd., 1919.

This is an epochal book. The subject of the memoir was one of the world's greatest and best of men. Osler's first words are: "Whether to admire more the man or his method, the life or the work, is for the reader of the well-told story to decide." Pasteur's three great discoveries were: (1) That all fermentations are produced by the development of a special microbe; (2) that infectious disease is produced by the development with the organism of a special microbe; (3) that the microbe of an infectious disease culture, under certain detrimental conditions, is attenuated in its pathogenic activity; from a virus it has become a vaccine.

One becomes absorbed in Pasteur's long life and labor, devoted, as he was, mind and heart, to the amelioration of the race. His studies on fermentation on wines and beer, on silk-

worm disease, and on various animal pests, due to micro-organisms, resulted in incalculable good to the material prosperity of his beloved France; but his subsequent work on rabies, cholera and other pathogenic organisms which invade the human organism, and which since the creation have taken such a fearful toll from the race, has made the present and all future generations his debtors to an incommensurable extent.

Pasteur exemplified the value of method, of technique; that the most essential thing for happiness is the gift of friendship; and that it becomes all men to exhibit humility before the unsolved problems of the universe. His biographer says of him that, although he was acclaimed in public and accorded flattering compliments, it was chiefly in his private life that his open-heartedness, his desire to love and to be loved, became apparent.

Pasteur's findings were strongly opposed, not only in France, but also in Germany and England. Liebig, in Germany, and Dr. Bastian, in England, were two notable lights who tried to controvert his proven results by long held theories. They held to the old doctrine of spontaneous generations, long after he gave absolute demonstration that the cause of fermentation was due to microbes. He had used his eyes and his reason; they had been influenced by tradition and untested hypothesis.

Many scientific men of Pasteur's time were carried away by the studies of Darwin and the pronouncements of such men as Huxley and Spencer into the sombre realms of scepticism and infidelity. Not so Pasteur. He held there were two men in each of us: the scientist, who starts with a clear field and desires to rise to the knowledge of nature through observation, experiment and reasoning; and the man of sentiment, the man of belief, the man who mourns his dead children, and who cannot, alas, prove that he will see them again, but who believes that he will, and lives in that hope, the man who will not die like a vibrio, but who feels that the force that is within him cannot die. The two domains, Pasteur held, are distinct, and woe to him who tries to let them trespass on each other in his so imperfect state of human knowledge. That separation caused in him none of those conflicts which often determine a crisis in a human soul. As a scientist, he claimed absolute liberty of

research. He considered it a waste of time to endeavor to penetrate primary causes. We can only note correlations. With the spiritual sentiment which caused him to claim for the inner moral life the same liberty as for scientific research, he could not understand certain givers of easy explanations who affirm that matter has organized itself, and, who, considering as perfectly simple the spectacle of the Universe—of which earth is but an infinitesimal part—are in no wise moved by the Infinite Power who created the worlds. Pasteur with whole heart proclaimed the immortality of the soul. No effort is wasted, according to him. He considered that "the greatness of human actions can be measured by the inspirations which give them birth."

We would like to see this story of this remarkable life not only in every physician's library, but also in every medical and scientific student's. The writer of this notice regrets it was not available to him in his student days.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Larynology, Hygiene and other topics of interest to students and practitioners by leading members of the medical profession throughout the world. Edited by H. R. M. LANDIS, M.D., Philadelphia. Vol. III. Thirtieth series. 1920. Philadelphia and London: The J. P. Lippincott Company. 1920.

Of the clinics, the leader by Thos. McCrae, F.R.C.P. (Lond.), formerly of Toronto, will appeal most to Canucks. The subject is Aneurism of the Hepatic Artery. Neither McCrae nor his assistants made a diagnosis. We doubt whether anyone could; but McCrae will diagnose the next one he sees, we believe. There have been only fifty-five previous cases reported—some due to syphilis. McCrae's patient submitted to operation, but died after a few sniffs of ethyl chloride; which teaches us to be cautious. There have been other cases of death from ethyl

chloride—not reported. McCrae did not think the anesthetic killed the patient, but a rupture of the aneurism.

Under the head of medicine there are contributions on Chiaris' net (get out your dictionary), argyria, the syphilitic phlebitis and thymogenous dyspnea. Magnuson writes on industrial surgical clinics. Under surgery, Bowers writes on sterilization (for certain insane); Clement Spalding deals with abscessions. Mary O'Malley writes on the concept of insanity; the section on pediatrics deals with tuberculosis, popular fallacies in pediatrics and reports a clinic at the Samaritan Hospital dispensary (Phila.), as taught in the Pediatric Department of the Medical School of Temple University.

An Introduction to Bacteriology for Nurses. By HARRY W. CAREY, M.D., Assistant Bacteriologist, Bender Hygienic Laboratory, Albany, N.Y. Second edition, revised. Philadelphia: The F. A. Davis Company, publishers. English Depot: Stanley Phillips, London. 1920. Price \$1.25 net.

Dr. Carey lectures to the nurses of the Samaritan Hospital Training School. This work embodies his lectures. In this edition some chapters are rewritten and in the chapter on Immunity an explanation is given of Complement Fixation.

The R. & C. Medical Quarterly. Vol. 1, No. 3. December, 1920.

A Christian Scientist and a Detail Man.—"Walking down a street in a mid-western city some time ago, a detail man for Reed & Carnrick noticed a sign in a window reading 'Dr. ———.' The name was unfamiliar—evidently a recent graduate starting in practice. The detail man entered, met the 'Dr.' and presented him with some samples of his products. Continuing the conversation, it developed that the 'Dr.' was not a physician, but a Christian Science healer. The detail man was flabbergasted—he must get his samples back *quickly*."

'As a scientist,' he parried softly, 'I don't suppose you will have any use for my samples and won't mind giving them back—some physician will be glad to have them.'

"'No, no,' replied the healer, 'I will use them with my own family. I only practise healing outside.' Can you beat it—practising healing on the non-cogibund outsider, and trusting to faith to cure him, and then using medication in his own family? Charlatanism in the guise of religion and cults of one kind or another is running riot in this country. Can't we do something to curb it?"

The Quarterly is full of just such witty paragraphs as the above, in addition to some scientific matter. It is clever and worth getting four times a year. Brother reader, send to Reed & Carnrick, Jersey City, enclosing your card and *The Quarterly* is yours for the year.

Short Talks on Personal and Community Health. By LOUIS LEHRFELD, M.D., agent for the Prevention of Disease, Department of Public Health, Philadelphia, with introduction by Wilmer Krusen, M.D., LL.D., Director, Department of Public Health and Charities, Philadelphia. Philadelphia: The F. A. Davis Company, publishers. 1920. Price \$2.00 net.

This book is designed to instruct the school pupil, the college student and the social worker in the elements of public health. The talks are presented concisely in simple language easily understood by the average person of school intelligence.

A Text Book of Histology. By FREDERICK R. BAILEY, A.M., M.D. Sixth revised edition profusely illustrated. New York. William Wood and Company, 1920. Price \$5.50.

The sixth edition of this Standard Text Book of Histology will be found useful alike for students and practitioners of medicine.

The arrangement followed is a satisfactory one, especially for students in that part I deals with histological technique and

the entire emphasis is on the methods to be followed in developing a sound knowledge of histology. This is as it should be.

Subsequent sections deal with the cell, the tissues and the organs of the body. Bibliographical references are given at the end of each section. Certain minor typographical errors are to be observed, as on page 325 in figure 222 where reference to Piersol's work is indicated by the word "Pearsol." The references to other text books, monographs, etc., would be more valuable if in each instance the date of publication of each of these was indicated after the name of the author.

These minor criticisms are not intended to detract from the approval which it is possible to give to this excellent text book.

Wine o' the Winds. By KEENE ABBOTT. Illustrated. Toronto: S. B. Gundy, publisher in Canada for Humphrey Milford. Price \$1.75 net.

This is a story to read in the comfort of an arm chair and a grate fire situate in the heart of civilization. A book of adventure of the best type, adventure undergone in the days of early settlement of the Western prairies, when immigrant trains threaded their way across the plains, and Indian raids and stampeding droves of cattle were ordinary perils to be faced. The strong wild life, heroism and loyal loves of those days is well set forth in this stirring novel.

Psychopathology of Everyday Life, by PROF. DR. SIGMUND FREUD, authorized English edition, with introduction by A. A. BRILL, PH.B., M.D., Chief of Clinic of Psychiatry, Columbia University, etc., London: Fisher, Unwin, Ltd., Adelphi Terrace.

Freud in his studies of borderline cases showed that the symptoms had a definite meaning, and referred to some definite conflict and learned that there was but a faint line between normal and neurotic persons. The psycho-pathological mechanisms so glaringly noted in the ill were observable in a less de-

gree in the well. As is well known, Freud and his disciples cure their neurotics by psycho-analysis. They claim that the symptom-complex results from a suppression of the libido. The libido originally had reference to the sexual desire; the younger psycho-analysts refer to it as the life force. Undamming the libido leads to some cure.

This book deals with the causes of forgetfulness of names, foreign words, order of words, mistakes in speech, reading, and writing, improperly carried-out actions, errors, faulty acts, attributing them to partial suppression of the libido.

A chapter on Determinism follows, wherein it is held that "certain inadequacies of our psychic capacities—whose common character will soon be more definitely determined—and certain performances which are apparently unintentional prove to be well motivated when subjected to psycho-analytic investigation, and are determined through the consciousness of unknown motives. The book is very instructive; we are, however, not persuaded of the truth of all of its conclusions.

A Practical Medical Dictionary of words used in medicine with their derivation and pronunciation, including Dental, Veterinary, Chemical, Potanical, Electrical, Life Insurance and other special terms; anatomical tables of the titles in general use and those sanctioned by the Basle Anatomical Convention; Pharmaceutical preparations, official in the U. S. and British Pharmacopeias and contained in the National Formulary; Chemical and Therapeutic information as to Mineral Springs of America and Europe, and comprehensive lists of synonyms. By THOMAS LATHROP STEDMAN, A.M., M.D. Sixth revised edition, illustrated. William Wood & Company, New York. 1920. Price \$6.50.

This is undoubtedly a *multum in parvo*. It may not be the largest volume published as a medical dictionary, but it is one of the best received in our office in years. The author has

evidently had before him the publication of something as practical as possible and as suitable, not for the medical librarian, but for the average every day medical practitioner. There are few medical words but will be found within its pages and as to the work of the publishers all we could say is that it is a credit to them in every way.

Imperfectly Proper. By P. O'D. Illustrated by R. E. Johnston. McClelland & Stewart, publishers, Toronto.

The author of this most amusing book is too well known to require any introduction to the people of Canada. His contributions to *Toronto Saturday Night* have been read by thousands, who regret keenly his promotion to London, England. We know of no more welcome holiday gift than a copy of "Imperfectly Proper;" and to those convalescing from illness, it will in many cases prove a more effective remedy than medicine—get it.

Modern Surgery, General and Operative. by JOHN CHALMERS DaCOSTA, M.D., LL.D., F.A.C.S. Eighth edition. Philadelphia: W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co., Ltd., Toronto.

The eighth edition of DaCosta's surgery is now in the hands of the booksellers. This work is already so favorably known that it is unnecessary to refer to its many excellent qualities. Suffice it to say that for a volume of seventeen hundred pages, there is no more complete or exhaustive text-book in print. The new edition comes just at the end of the war and it is one of the first of the standard books to appear in revised form after the great addition to surgical knowledge which has resulted from the war. The influence of the war is seen in the excellent chapters on tetanus, shock, treatment of wounds, and infections. An article on the transfusion of blood is excellent and in marked contrast to the notice given to the subject in ordinary text-

books. The chapter on tumors of the brain is completely revised and contains a clear account of the newer methods of localization by means of the turning-table test, caloric test and so on. In fact, this new edition appears to have been brought thoroughly up to date and it can be recommended most highly for the libraries of surgeons and general practitioners. For the ordinary undergraduate student it has the disadvantage of being, if anything, too exhaustive, approaching as it does the dimensions of a small system, but for advanced students no better general text-book can be found.

The Journal of Organotherapy, a record of progress in the study of the internal secretions and metabolism—formerly known as *The Metabolis*.

Every practising physician, if he desires to keep in the vanguard of modern medicine, must keep himself versed in the subject of metabolism, which has made tremendous strides of recent years. In order to do so, he should become a regular reader of *The Journal of Organotherapy*. The publishers, G. W. Carnrick & Co., New York, will gladly send him each issue as it leaves the press. It contains a great deal of most valuable information regarding Vitamines, Hormones and allied subjects and is a literary production that is a credit to its publishers.

Advanced Lessons in Practical Physiology for students of medicine, by RUSSELL BURTON-OPITZ, S.M., M.D., Ph.D., Associate Professor of Physiology, Columbia University, New York. Octavo of 238 pages with 123 illustrations. Philadelphia: The W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co., Limited, Toronto. Price \$4.00 net. 1920.

The author has endeavored to supply medical students with a guide to their practical work in physiology. It is not intended to supply the fundamental principles which will be obtained from suitable lecture courses and text-books. The clean-cut

separation of lectures and practical work which the author strongly urges will no doubt have to be modified and controlled by the resources of a particular institution. With the required teaching staff, material and apparatus this course of lessons will be extremely helpful.

Throughout the course the student is given very clear instructions how to proceed with his work. An attempt also has been made to stimulate the power of observation by pertinent questions and not by providing the required information. This ideal has not been attained, and by eliminating numerous answers to these questions the book might be reduced in size and cost without diminishing its value to the student.

The earlier lessons are devoted to muscle and nerve problems. We then pass to a very complete and interesting series of experiments on the heart and the circulation. The succeeding section in which respiration is considered might be amplified by the addition of work based on more recent investigations. The nervous system, the sense organs and the digestive system are then investigated in turn by the student. An appendix of more complex demonstration experiments completes the course.

The book is very well produced and contains several blank pages after each exercise. The text is illustrated by numerous diagrams and photographs. In this otherwise helpful book we have noticed with much surprise the inadequate acknowledgment of sources in the numerous cases where special apparatus is reproduced and recommended to the students. The surname only of the investigator occurs where fuller references to the literature could have been given to the student.

Practical Massage and Corrective Exercises with Applied Anatomy. By HARTVIG NISSEN. Fourth revised edition, with sixty-eight original illustrations, including several full page half-tone plates. Philadelphia: The F. A. Davis Company, publishers. English Depot: Stanley Phillips, London. 1920. Price \$2.00 net.

In this revised edition Dr. Nissen has added important "Corrective Exercises" with full description of their effect and

muscles used in different movements, and also "The Most Essential Applied Anatomy." One of the crying needs in medical education is that of some teaching in massage. Lots of massage does more harm than good. Not one doctor in ten knows enough about it to direct his masseur or masseuse properly. It would help the nine to get this book, read it and then get some practical instruction on the subject.

The Gorgeous Girl. By MALBRO BARTLEY. Illustrated. Toronto: S. B. Gandy, publisher in Canada for Humphrey Milford.

Two types of the modern women are vividly outlined in this up-to-date novel, "The Gorgeous Girl," who had never known anything but the gorgeous side of life, and the private secretary to a business man, typically named Mary Faithful.

The action and reaction of the influences exerted by these two upon the life of the business man, Stephen O'Valley, with its inevitable outcome, form the main theme of the story.

Skilful characterization, good dialogue and keen epigram make the book altogether readable.

Cunningham's Manual of Practical Anatomy. Revised and edited by ARTHUR ROBINSON, Professor of Anatomy, Edinburgh. 7th edition. Vol. III. Head and neck. With 233 illustrations, many colored. New York: William Wood and Company. Edinburgh, Glasgow and London: Henry Frowde and Hodder and Stoughton. 1920.

It is difficult to write anything but words of praise for this latest volume. What we wrote respecting the former volumes, which was all praiseworthy, may be written respecting this. The text has been revised, many of the illustrations representing dissections, sections and radiographs are new. Instructions for dissection appear in distinctive type. The whole set should appeal to teachers and students of anatomy; while this volume, which deals very fully with the brain, will commend itself to our alienists and students of psychology.

The Treatment of Wounds of Lung and Pleura, based on a study of the mechanics and physiology of the thorax. Artificial pneumothorax, thoracentesis, treatment of empyema, by PROFESSOR EUGENIO MORELLI, assistant in the medical clinic of the Royal University of Pavia, Maggiore Medico, Field Hospital No. 79. Translated from the Italian by Lincoln Davis, formerly Lieutenant-Colonel, M.C., U. S. Army, and Frederick C. Irving, formerly Major, U. S. Army. Boston: W. M. Leonard, publisher. 1920.

This most interesting monograph from the pen of an Italian writer should afford very refreshing reading to those in touch with thoracic surgery. Major Morelli's training, both as an assistant to Prof. C. Forlanini, who in 1882 introduced the treatment of pulmonary phthisis by the induction of artificial pneumothorax and as surgeon in charge of an Italian hospital devoted exclusively to the treatment of wounds of the lung and pleura, places him in a position to speak with authority. "At the beginning of the war the concept that one should not intervene surgically in wounds of the lung was absolutely dominating," he says in his preface. "I am absolutely convinced that intervention ought to be systematic and almost invariable in every wound of the lung." His arguments to prove this are most logical and convincing and are supported by experience with sixty-five specific cases. The translators are to be congratulated on making the text easy and fascinating reading. Both physicians and surgeons will find it a book well worth while.

Medical Record Visiting List or Physicians' Diary for 1921, revised. New York: William Wood & Company, medical publishers.

In this new edition the dosage table has been modernized and now conforms to the last U. S. P. A table of differential diagnosis of contagious diseases has been added and other parts modernized. The calendar, pregnancy table, equivalency table, tables of signs, hints on making wills, address register, and many miscellaneous facts, make this a desirable pocket companion for every practitioner.

A *Text-book of Physiology for Students and Practitioners of Medicine*, by RUSSELL BURTON-OPITZ, S.M., M.D., Ph.D., Associate Professor of Physiology Columbia University. Illustrated. Philadelphia and London: The W. B. Saunders Company. 1920. Canadian agents: The J. F. Hartz Co. Limited. Price \$7.50 net.

This is the first edition of a new text-book of physiology. In its 1,146 pages the mechanical and physical side of physiology is covered in a manner which meets the requirements of the medical student and the practitioner. Physiological chemistry is only dealt with in its wider aspects. There are no departures from the usual text-books of its kind. It is well written, well illustrated and will be found to fulfil thoroughly the purposes for which it is written.

PALESTINE'S FIRST MEDICAL JOURNAL

PALESTINE's first medical journal, "Harefoah" (*Medicine*), has just made its appearance, published by the Jewish Medical Association of Palestine. The journal is a quarterly and its first issue is dedicated to the memory of the Jewish physicians and nurses who "lay down their lives in the years of upheaval in the Holy Land."

The objects of the medical association, as outlined in the quarterly, are to strengthen and co-ordinate the medical forces of the country and to collaborate with doctors outside Palestine; to give the medical work a national as well as a humane value; to prepare a native soil for Jewish scientists; and to help in the creation of the Hebrew University.

Medical work in Palestine has advanced rapidly during the past two years, stimulated by the American physicians and nurses with the American Zionist Medical Unit, who have taught the native members of the profession all the latest ideas in medical work and sanitation. Clinics are held by the American doctors, to demonstrate to the Palestinian doctors the most modern methods, and lectures are given at regular intervals.

The hospitals and clinics established by the American Zionist Medical Unit in Palestine, are planned as the beginnings of the Medical College of the Hebrew University at Jerusalem, which Prof. Patrick Geddes, noted town planner of the University of Edinburgh, is designing.

United States Naval Medical Bulletin, published for the information of the Medical Department of the service. Issued by the bureau of medicine and surgery, Navy Department. Report on medical and surgical developments of the war, by WILLIAM SEAMAN BAINBRIDGE. Washington: Government printing office.

This volume, which (we presume) may be had for the asking is full of practical pointers for the surgeon and general practitioner, who perforce must do some surgery. It deals with antiseptic solutions, splints, artificial limbs, repairs to face wounds, re-education of the disabled and all sorts of topics of surgical interest.

Elements of Practical Medicine, by ALFRED H. CARTER, M.D. M.Sc. Revised by Alexander S. Gibson, M.A., D.M. (Oxon.), F.R.C.P. (Lond.). Eleventh edition. London: H. K. Lewis & Co., Limited, 136 Gower St., W.C. Price 16s. net.

Text-books so soon fall behind current teaching, new editions are frequently called for. This is essentially a book for medical students, nurses, young practitioners and those members of the laity who want to get a bird's-eye view of medicine. The author, recently deceased, belonged to the old English type of practitioner. Though retired, the war called him to service and he served with distinction in several spheres at home and abroad. He never spared himself. His labors, plus the grief at losing two sons, hastened his death. It is a worthy memorial of him.

The American Pocket Medical Dictionary. Eleventh edition. Revised and enlarged by W. A. NEWMAN DORLAND, A.M., M.D., member of the Committee on Nomenclature and Classification of Diseases of the American Medical Association. Philadelphia and London: W. B. Saunders Company. 1919. *

The author has accomplished the difficult task of providing a comprehensive and up-to-date dictionary in a book of small and convenient size. In addition to the usual definitions alphabetically arranged, it contains a large number of useful tables, including important headings where large numbers of correlated facts are grouped, a full index of which appears at the beginning. Physicians and students will make no mistake in having a copy on their desk for ready reference.

A LAY ESTIMATE OF THE DOCTOR

THE doctor is altogether a special kind of a person. His illusions are few. His inside information is enormous, and if, now and then, he wears a superior smile, forgive him. He has probably just heard some remark which he knows to be fatuous or hypocritical. Again, his jokes are likely to be a bit technical, and his view of life materialistic. But if he has a brand of idealism, you can put your trust in it, for he has learned it in a hard school, and it is genuine. He has faced the worst, and can still believe the best. And if he has a religion, it will be worth coming at, for he has wrested it out of the actual battles of good and evil in our common life seen at close range.

The lawyer we take into our confidence when we get good and ready; the clergyman we admit to parlor and dining-room; but the doctor goes into bedroom unannounced. He goes in at a time when the house, temporal and spiritual, has not been set to rights for his reception, but if what he sees there surprises him, he seldom lets it be known. In the healing of bodies he has opportunities for healing souls which could never come to

a priest, and with which many a priest could not deal. He is the lay father-confessor, regardless of creed. In cities, his club ability is famous. He always fits. And clubs are justly full of him. Any club member is always safe in replying to any other's salutation, "Good evening, Doctor." He is a safe man on committees; he can turn his hand to any public business, and, if left alone, discharge it creditably. He knows more psychology in five minutes than the philosopher in a week, and he is withal the least emotional of men. The peculiar thing about him is that while fighting his grim and silent battle with death without the applause of a crowd, often without pay, and sometimes without even gratitude, he seems superior to all these considerations. He is responding to a higher sort of *noblesse oblige* which is almost unintelligible to the average man, hot for the average prizes. Compared with the impetuosity of military men, the ecstasies of religious leaders, and the silent fortitude of starving artists, the frozen enthusiasm of the doctor is a very curious manifestation. It may be something in the training he gets, for, no matter what the youngster may have been, if he has anything in him it will go hard if his practice as a physician does not bring it out. And to him belongs the final reward of service, which is the increased opportunity for service."—*Boston Transcript*.

A CHINAMAN was asked if there were good doctors in China.

"Good doctors!" he exclaimed. "China have best doctors in world. Hang Chang one good doctor; he gleat; save life, to me."

"You don't say so! How so?"

"Me velly bad," he said. "Me calle Doctor Han Kon. Give some medicine. Get velly, velly ill. Me calle Doctor San Sing. Give more medicine. Me glow worse—go die. Blimebly calle Doctor Hang Chang. He got no time; no come. Save life."—*Green Bay*.

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Editorial

MEDICAL SOCIETIES AND ASSOCIATIONS

AS a measure of self-protection, medical men must get together. The reason inmates of our lunatic asylums do not overpower the handful of guards and escape is because they don't know enough to get together. The osteopaths and chiropractors of Alberta knew enough to get together and got a feebly opposed bill through the Legislature which "raised Ned" among the regular medical men, who, in turn, got together, roused in their might, and brought such pressure to bear on the Legislature as to compel a rescinding of the Act.

But there are many other reasons beside why our profession should be thoroughly organized from coast to coast and from the United States boundary to the Arctic regions. Men must be kept alive. Too many of them, after graduation, settle down in some

cross-roads corner, become economically independent, and then vegetate or pass into a condition of dry rot. This habit must be stopped. It's bad for the doctor and bad for the community. Men every five years at least should get off for several months' post-graduate work. We do know men now who go away a fortnight or a month every year to brighten up.

The meeting of the provincial and Canadian associations are partaking more and more of a clinical aspect. This is as it should be. Attendance at such gatherings may supplement the post-graduate courses. We are glad the county societies are affiliating with the Ontario Medical Association. Every county should be organized and become a branch of the larger association. We would like to see the provincial associations linked up to the Canadian Medical Association much in the same way many of the county societies of Ontario are with the provincial body. We would like also to see one fee—say fifteen, twenty or twenty-five dollars—cover yearly membership to the whole series of medical societies. More and more, the meetings of all auxiliary bodies, such as public health, nursing, venereal, hospital, and all such associations, should be held during the same week or fortnight as is the Dominion or provincial association.

The world is undergoing a re-birth. We are in the midst of a rapid evolution (if not revolution), socially, politically, economically, and religiously. The voice of the medical profession must be heard

and its influence felt, not only on behalf of the other fellow (something it has never lost sight of), but on its own behalf.

It is high time to awake out of sleep. The lamps must be trimmed and the loins girt.

MEDICAL EDUCATION

OUR medical schools are again in full blast. Medical students who were off during the war are now back and with them an unusual number of freshmen, despite the increased cost and the lengthened course. In England, it is estimated that it will cost on the average £1,500 to put a boy through medicine. We believe in Canada perhaps one-half to two-thirds of this amount would be required. The cost will depend to some extent on the location of the school, the social status of the student, and upon whether he has expensive tastes or not.

The poor boy hasn't much show nowadays. Few boys will be able, as of yore, to put themselves through. This preclusion of the poor boy of ability is unfortunate. There will always be a considerable number of rich mediocrities carried through or who make a bare pass, who would be better behind the plough or the counter—misfits. It is to be hoped the universities will be able to offer more scholarships, bursaries, or the like, which will enable the struggling student to help himself along. The Gov-

ernment may likewise do something to give the bright poor boy a chance.

Let no student enter the portals of medicine with the idea he is going to have a "snap" or an easy row to hoe, either during his college term or after he graduates, when he is working up a practice or even when he secures a big practice or a poor practice. Hard, hard work is before him, and a life of a good deal of self-sacrifice and self-denial, with but a fraction of the remuneration he would receive were he to expend the same amount of brains and energy in business, farming or speculating. To the medico the following stanza may well apply:—

The heights by great men reached and kept
 Were not attained by sudden flight;
 But they, while their companions slept,
 Were toiling upward in the night.

and Surgery

Toronto

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

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Original Contribution

BETTER HOSPITALS

J. N. E. BROWN, M.B., TORONTO.

REV. FATHER MOULINIER gave an address to the doctors, sisters and nurses of St. Michael's Hospital on Nov. 27th. His Grace Archbishop McNeil was an interested listener. When the writer of these lines arrived the speaker was saying that the Council of Medical Education engaged in estimating the hospitals of the States from the point of view of the interne, considered that if a medical man gets 100 per cent. modern medicine some time in his life, 20 per cent. he acquires at the school and 80 per cent. afterwards. It was inevitable that the medical profession of the States should turn its eyes towards the hospital. Hence there was printed a list of those hospitals which were places for real scientific internship. Some six years ago the American College of Surgeons came into existence—a body of the leading surgeons. At first there were gathered men of the most unquestioned reputation as the leading surgeons. Some 500 gathered in Washington as charter members of the college, which now includes 4,000, with a waiting list of 15,000. It is as much a Canadian as a United States body. This present year they have taken in members from South America. We may look forward to a real full American College of Surgeons.

These 500 charter members, at a banquet, the speaker was told, had proposed to them this question: Why have you organized? Is it to get together once a year to partake of an elegant banquet, sound one another's praises and go back each to his respective home and live on the flattery that was meted out freely? Their immediate answer to that question was, No. The reason for our existence is to try and do something on this

continent. Being patterned after the Royal College of Physicians and Surgeons in England, they said, we have a mission to perform. We know that there is incompetent surgery and malicious surgery going on all over this continent; there are men practising surgery not qualified, practising merely for money; go into it before becoming fit, and keep at it in spite of their incompetence. These charter members of the College of Surgeons said: We owe it to the public to protect them against all this wrong surgery. It was clear to anyone who knew anything about the situation that this could not be done without entering into the work of hospitals, because it is in hospitals most of the surgery is performed. Hence they secured the services of Dr. Bowman (a layman and Ph.D.), who, after gathering much data from Canada and the States, undertook to make a preliminary survey of the hospitals of the continent. After having another large meeting in Washington a few months later, he paid a visit to the Surgeon-General's office to get all the information about what is indispensable fundamentally to a proper hospital service, and after calling in experts from all parts of the continent they formulated what they now call a minimum standard of hospital service.

Just about this time I had the good fortune to have thought of forming an association of Catholic hospitals. Having been connected with a medical school for some years I saw very clearly that medical students would not be taken proper care of after leaving the schools unless something was done with the hospitals. I looked up the list of Catholic hospitals and found there were 650 in North America. A meeting of representatives of these was called in Milwaukee six years ago. We had represented 52 hospitals—103 people, sisters mostly, a few doctors and a few nurses. Last June we had a meeting in St. Paul. There were in attendance for three days between 700 and 1,000 sisters, 50 or 60 doctors, a fair number of nurses, and some 20 or 30 clergymen. The investigation of the American College of Surgeons showed that these 650 hospitals conducted by the sisters have about one-half the bed capacity of all the general hospitals of our northern continent.

When they started their work of standardization actively,

carrying all through the country their propaganda for a better hospital service. Dr. Bowman, along with Dr. Franklin Martin, and Dr. Wm. Mayo and several others of the leading men of the American College of Surgeons, came to the conclusion that if they would carry on their work with satisfaction and as their spirit prompted them to, they would have to have an agreeable and acceptable entry into the Catholic hospitals. So Drs. Bowman and Mayo went to his Eminence Cardinal Gibbons and told him what they proposed to do; and got a letter of endorsement from him. Shortly after they came to me as President of the Catholic Hospital Association and asked me if I would join in with them in their effort to make hospitals a better place for sick than they had been. After consultation with the Archbishop at Milwaukee and speaking to my Superiors for leave, I got their permission to join hands with them most heartily, and ever since that time have been in close co-operation with the American College of Surgeons in the effort to make better hospitals. The word "standardization" has become a shibboleth. It means nothing more than trying to make better hospitals. The term minimum standard does not mean an arbitrary standard. The collective brains of the medical profession of Canada and the United States on the part of men who are supposed to be the leading thinkers in the matter have been employed—mobilized for the determination of what is called the "Minimum Standard." It is made up of three main points: there are three main requirements with a few others which are logical deductions or corollaries from these three. The first requirement is organization; the second is case records; the third is adequate laboratory service; the fourth is the declaration on the part of those who serve in the hospital that they will not participate in the secret division of fees in any form or case; the fifth is autopsies. These should be sought by concerted action in the case of deaths resulting from unknown or uncertain causes.

One sees clearly that such a programme is not one that requires large funds. It will cost very little to organize—in the way of money. It costs but little to institute records—a record room and a keeper. The laboratory may cost something

in initial expenditure and will continue to cost if properly equipped and kept up to date and properly manned. Having members of the staff sign against secret fee splitting costs nothing. Getting autopsies costs very little, if anything. And so the whole programme is not one arbitrarily forcing upon institutions a large outlay of money. It is a very exacting programme in so far as outlay of mental effort, determined purpose, high ethical standing on the part of the staff are concerned. It calls, therefore, for a type of man and woman in the hospital—it appeals to all that is best and deepest in us—scientific, ethical and religious; because it means unstinted effort to bring to every patient in the hospital, irrespective of who or what he or she is, as near 100 per cent. institutional medical service as the group of men and women in the hospital are capable of giving and can reasonably be expected to give. That is the soul and purpose of the minimum standard. I think that is the secret of its success. No body of men without legal binding, without any power except the power of the truth, could go over the continent and get the response that they have received unless they had a programme that is inherently true and right, appealing to the best minds and the best characters in the medical profession and having the approval of the managers of hospitals and nursing schools.

What do they mean by organization in a complex institution like a hospital? It means that the medical staff shall be so co-ordinated that within itself and with the managing personnel and the nursing division of the hospital that there will be sympathy and clear and sure functioning of the medical staff in its bringing to the patient and to every patient as near 100 per cent. of up-to-date institutional medicine as can reasonably be expected. The men themselves, therefore, must be organized. There should be departments covering the whole field of medicine, with a director of each department. There should be a president or chairman and secretary of the staff. There must be at least monthly meetings at which every member of the staff is expected to be present, for the purpose of reviewing the work of the hospital accomplished during the preceding month. Personally, I believe all the rest that is

spoken of as part of standardization can be disregarded as far as effort and propaganda are concerned, provided you have this one feature working in an institution. Have a body of medical men working in a hospital—I don't care how many forms of staff or divisions of the staff there may be—there may be a university division; an un-university division; there may be specialists; there may be a staff by courtesy (a visiting staff to whom is extended the privilege of bringing patients into the hospital); but it is essential that all these men meet at least once a month and ask one another—have brought before them—what the hospital has done during the past month with the patients who came to it.

The hospital patient in terms of modern medical thought is the institution basis of the medical group (call them what you will), with the nursing group, with the governing body of sisters or sisters and clergymen and laymen. The institution stands before the public as the place where the sick are cared for, where the sick are given every kind of the latest service known to the medical profession, to the nursing profession and to the hospital managers. If that is the kind of institution the hospital is, the public, the keen, observing, searching public, will say to itself or may say to itself, has a right to say to itself, "If I go to that hospital I'm sure I'll get all that modern medicine, as known in this locality, can be given to me in the way of careful diagnosis, operation (if necessary) medical or drugless treatment (if necessary); and I feel I may put myself into it, where I can get all that I have a right to look for." If any shrewd business man in Toronto said that to himself and came to you here, approaching any one of the individuals concerned with this institution and said to you, "Is that the kind of institution St. Michael's is?" You would have to say you thought so; at least, you wanted it to be such, that you hoped it were such, because you couldn't say "Oh! no, that is not the kind of institution St. Michael's is. You go there and you'll get some service; may be all right, may be not; depends on the man in whose hands you fall, upon the nurses who take care of you. It will depend on many circumstances as to whether you will get this fine, complete modern up-to-date service." None of you would say the institution does not stand for that. You

will be obliged to say to such a man—I conceive at least if you have been thinking along the lines of modern progress in regard to hospitals—"St. Michael's is one of the best hospitals on the continent; come here and you will get all you have the right to expect: fine medical men (university men); best nursing school, a body of sisters unequalled. We are under the Archbishop and a Board of Directors, so come here and you will get as near 100 per cent. institutional service as any institution can give you on this continent." Of course, you will say that, you'll mean it and want it. I have every confidence in stating that every man and woman here believes it to be that kind of institution; if not absolutely, at least determined to reach that height of progress and service.

What I have said brings out this one point, which is fundamental: the whole movement of standardization is centred on the patient. The institution is not primarily for the medical profession. No hospital is. It is not for the nurses, or for the group of sisters, or trustees. But these three bodies have united together and are co-operating with one another—skilled workers, who are giving to patients everything the patient has a moral right to get. And it is to the credit of the College of Surgeons and to the leading men of the medical profession that they recognized this right. They realize that they have come into these institutions for their patients. They realize that hospitals are there for patients, not for themselves. There are many incidental benefits to all concerned; but the real soul, the centre, beginning and end of the hospital is the patient and the patient's moral right, a God-given right, as against the medical profession, nurses and managers; a right that has to be respected, that he get full satisfaction to that right. The obligation of all is that his right be met and served and answered. That being the case the prime function of the medical staff, the prime function of sisters and nurses is to know from day to day if possible, from week to week if possible, certainly from month to month—know they are giving the patients that kind of service.

How is that found out? By meeting together and by questioning the work of the hospital, questioning the output of the

hospital—to use a word common in modern industry. How many patients have been admitted? How many have died? How many have been kept longer than they need have been? Find the facts and face them fearlessly is the alliterative way in which the whole thing is formulated in my mind. Any group of men and women doing any work for human health who are not brave enough, morally brave enough, large enough in character, to face facts of their combined efforts as members of an institution, I claim are not fit to be in the institution and are untrue to their deepest obligation.

If my thesis so far is proven or acceptable to you, the next question is, how are you going to find the facts in regard to what the hospital has done for its patients? There is only one way. *There must be a record of all that is done for the patients.* They may be entered either by name or number. There are other things that for managerial purposes the first office must know, as a matter of finance and organization, but these are not the points the college is aiming at. The medical profession wants to know what you as doctors and nurses have done of scientific value in an institution for the care of human health. It wants to know what the patient came in for; what the patient thought was the matter with him. That is the starting point. That can be found out at the office desk by someone. The next step is a purely scientific step—to find out what you think is the matter with him—what is really wrong. Modern medicine is very different now from what it was ten, twenty or thirty years ago. We have improved in medicine to-day. To know the subject now means a knowledge of a group of sciences hardly known fifty or sixty years ago. A few leading men knew some pathology, some bacteriology and some biological chemistry—very little of that. Mere gross anatomy was known from the earliest days. Medicine up to recent years has been a mere empirical symptomological science. To-day it is something very different. Years ago there was a lot of mystery about medicine—superstition of all kinds grew up because people didn't know what these fearful diseases came from. Hence, in the olden time, a look at the patient, feeling the pulse, examining the tongue, a close, experienced glance at his complexion, the color of the white of his eyes, might have been enough, and

scientific, too, as grounds for a diagnosis. Old Hippocrates, the Father of Medicine, has left records of his time which are specimens—wonders of scientific record. The young lady in the office may do almost what was done by that great Father of Medicine. What she learns to-day—this lay admittance clerk—if she has experience enough—is about all that was learned by those splendid old practitioners of fifty years ago. To-day medicine is a very different thing, as we all know. We know to-day that there is an inheritance or heredity involved in the conditions: that is not very modern in reality, but it has become a matter of scientific formulation in connection with the personal history. The history of the condition in which the patient finds himself or is found is noted. John B. Murphy used to say that eighty per cent. of the diagnosis lay in a carefully made history. Therefore, with this knowledge of what the history means, the man to-day who does not make a thorough examination and record of his case is not practising modern medicine, is not giving the patient what he has a right to, is not using the obvious and fairly easy but, at the same time, quite expert, means of really discovering what is the matter with the patient. If I went to your record room and found very few histories: if I were to find there that an operation had been performed with no history, no record of physical examination, no laboratory tests and no preparative diagnosis, what conclusion would be forced upon me? That the man who had that case had not, or didn't care to use, or didn't care to regard the recognized means—the only means to make an operation a safe procedure.

To-day in any institution only an emergency—a pressing emergency—is the only excuse for an operation to be performed without a careful history and a careful physical examination—all the laboratory tests indicated, including an X-ray and a carefully-thought-out preparative diagnosis. After all, what is an operation? It is a mechanical procedure by which a surgeon hopes to remove something that is causing pain and ill-health to the patient. Would any of us be satisfied with the treatment he got if he were told by the doctor there was need of operation if he knew that the doctor had formed his judgment without using all means to make that judgment as

sure as modern medicine can make it? We would all revile such treatment, and rightly resent it; because the day of trial surgery, the day of mere empirical surgery, is past. The conscience of the medical profession disapproves of this sort of thing, because so many helps to diagnosis are available. Such a thing is looked upon as absolutely unprofessional, not to use a stronger word about it. Therefore, the conclusion is that unless the case is an emergent one, or so baffling that after the most thorough investigation has been made the best that can be done is to say, we don't know what is the matter; we think there is something wrong, and if you don't object we will do an exploratory operation. Short of these two, the duty now resting on the medical profession, whether surgery or medical treatment is involved, is to see that all the means which have been discovered through the growth of the fundamental sciences involved—bacteriology, physiological chemistry, pathology, X-ray, are used to find out what is the matter with the patient before doing anything for him.

This hit and miss procedure, so unscientific, this guess-work, the shrouding and beclouding of what is wrong with the patient, the day of this sort of thing is pretty nearly gone; I may say it has absolutely gone. . . .

There is nothing so inspiring to me as a layman, as the open-minded, above-board procedure of the leading medical men of our continent. They either know, or they don't know. The biggest of them, too, are first to say we don't know. And the larger and the greater the man is, the more ready he is to say I don't know. Groups of men working together in an institution will give the best of their specialized thought in trying to ascertain what is the matter with a patient, and still be unable to come to a conclusion. They say possibly this or that is the matter, and express a willingness to do what they can, but confess to the patient that as far as their knowledge goes they have not been able to ascertain exactly what is wrong.

Then out of the deduction, that every patient has a right to this step by step diagnosis, the staff conferences concur in the request made by a group of men working in the hospital that every man, no matter in what capacity, be brave enough

scientifically and professionally to stand up with his fellow professional men and face the facts as he has wrought them out, either with his personal patient or the ward patient.

I have often been told, after saying what I have, by medical men, that it is too much to ask of a group of medical men. Two years ago I was told on several occasions that it could not be done: "You cannot get the medical profession in any locality to face their own failures and reveal their own ignorance." I do not know whether or not it was too hard then. I know now it is not too hard. I know groups of men all over the country doing that very thing. I know they are the most satisfactory medical professional men on the continent, just because they are doing that thing. I know they are growing more rapidly than those who are not doing it. The reputation of their hospital has spread all over the country. This plan has been carried out at the Mayo clinic for years. Some of you have been there and sat at the weekly Thursday meeting where the failures at diagnosis and failures at operation are brought before the staff. I've been there, and I hope some of you have. And this thing is being done in other places. Everywhere it has been done there is the same satisfactory feeling, a feeling that used not to exist prior to these confessions and conference. It simply comes from doing their full, plain, manly, professional duty. They investigate their own work. They are seeing whether their hospital is doing what it professes to do for its patients—giving them real, genuine, up-to-date, combined, co-operative service. That is what they are doing—plain, simple devotion. It means work. You see it means concentrated thought and study; it demands a keen responsible professional conscience, demands not only that in the individual, but in the group. It means that no inefficient man, ungenuine, can live in the atmosphere of that kind of institution. It demands that the incapable man will either get out or grow and take the means to grow. It means that he will learn what he is supposed to know. It means the growth of men mentally, ethically, scientifically and even religiously; because there is a certain consecrated devotion involved in that kind of staff service to the patients. And this spirit affects every person in the institution—every one will feel his sense

of personal responsibility. The nurses rise and develop into a conscientious body, individually and collectively, with a seriousness that is most stimulating. It is not unheard of in the past that nurses' charts didn't mean much sometimes—that they were unreliable, that things put down on the charts were not always credible. Under the new spirit, it means, where in the past there was group carelessness, thoughtlessness, a more or less light attitude towards the routine functions by nurses, a spirit of ambition to give the patient one hundred per cent. service. To the patient everything counts. A false temperature record, false pulse, a failure to follow out the doctor's orders or to modify them without his knowledge, may be of serious consequence.

If you, as a group of men, face the facts of your past month, your whole record is brought up in case of death, in case of a prolonged illness, and every fact in that record is looked at from the viewpoint of its influence on the welfare of the patient, so that the staff realizes its individual and corporate obligation, its influence reaches out into the whole hospital, and every move, every function gets a significance that in the drifting hospital of the past couldn't be looked for, couldn't be expected. Fifteen, twenty and thirty years ago, the hospital was looked upon by the general public, by the medical profession, by nurses, by sisters, managers and superintendent, by trustees, almost without exception, as a clean, kindly, helpful boarding-house for the sick. That concept of a hospital is utterly gone in the minds of the leading men in the medical profession, to the nursing profession and to those in touch with the movement for standardization. The hospital is an absolutely changed institution; it has to-day an institutional conscience, which means that every person working in it is keenly alive to a sense of responsibility to every patient.

RECORDS.

The records are the centre of it all. Records are hard to keep. Records demand labor. Records require of the medical profession their best concentrated thought. Records mean nothing unless there is back of each record, and of every part

of it, the signature of a responsible, educated, scientific, medical man. That means that every medical man must either write, or correct and revise, or read and o.k. and finally sign his record. Every hospital owes a record to its patients. It is the abiding statement or written voucher to the patient of what has been done in the hospital for him. It may be of very serious legal consequence to him and to the hospital. That is a minor consideration, however. It is due the patient because the hospital is a complex institution. Many things are done for him. If he is alert and wise and particular about every service rendered him, as most people are, and becoming more and more so to-day, he demands it. If he as an alert exacting man has a right to demand it, then every patient has a right to such service, because his right is not founded on the fact that he is wealthy or has social position. The only safe basis on which any right to that kind can be placed is the fact that he is a human being, that he is a creature of God, that his life is his deepest and most fundamental gift. If any one of us has not a right to life we have no rights; and if we have a right to life we have a right to well-being of life, which is health, and of service to bring health back when lost. Out of that fundamental thought comes this right to that exact service fulfilled in the record. More than that, the medical and nursing professions and the managerial part of the hospital owe to the profession itself, owe to the great public which may become a patient at any time, a scientific statement upon which medicine may grow. Medical knowledge, to the extent of seventy per cent. of its mass, has grown out of the scientific records kept by leading men in the profession in Europe and America. Most of the articles written in the numerous medical journals are the reports of men who have kept careful, scientific records. What right has any group of men, anywhere to-day in civilized countries, to refuse to keep records? These are the repositories of scientific data out of which medicine may grow for the benefit of coming generations. It is inescapable. Medical men may say, what have we to do with it? We are busy practitioners. We have to take care of the patients. The next generation can take care of itself. Such an attitude is wrong, wholly unprofes-

sional. It is the busy man, the clinical man, who makes the records. The laboratory men are at work in the schools and hospitals. They will help. They may discover, they have discovered, many things, but the real growth of medicine as an art comes out of the clinical profession. It is the articles contributed by the clinical men to medical journals which have done most for the profession. When the text books come out the material is five or ten years behind. The knowledge from the laboratory workers reaches the medical profession through a process of slow trickling, but the clinical man who has been a keen observer, and who keeps careful records through a series of cases, comes out with an article which reaches the medical profession of the whole world in a short time. Because, be it said to the credit of the medical profession, they are the keenest readers of their own journals of any profession I know of.

THE ROLE OF THE SPINAL FLUID IN DIAGNOSIS

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Since the elaboration by Quinke, in 1891, of a method of lumbar puncture, that operation has proved to be a valuable aid in the diagnosis and treatment of diseases of the central nervous system.

It is not the object of this paper to suggest any new diagnostic method, but simply to indicate the necessity of greater co-operation between the practitioner and the laboratory worker with regard to the examination of the cerebrospinal fluid.

The operation of spinal puncture is neither a difficult nor a dangerous procedure, providing the essential technical precautions have been observed. Practically the only contraindication is brain tumor, cerebral or cerebellar. In the great majority of cases there are no after-effects. Occasionally there is headache, rarely nausea and vomiting.

The diagnostic value of a spinal fluid examination is best

appreciated after a complete analysis of the fluid. Aside from the isolation of micro-organisms, no one laboratory test is specific. Moreover, all laboratory data must be considered in conjunction with the clinical aspect of the patient.

The indication for spinal puncture in conditions of meningeal irritation is apparent. In cases of central nervous system involvement of a more or less obscure nature, an examination of the spinal fluid is often of material assistance in arriving at a definite diagnosis. Especially is this true in those conditions due to syphilitic infection. In general paresis, even before distinctive signs and symptoms are present, the spinal fluid may show a well-marked reaction, and so put the physician and relatives on guard against the moral delinquencies accompanying this disease.¹ It is important in every case of syphilis to determine if the central nervous system is involved. Craig² suggests that no case of syphilis should be considered as having been best treated unless the spinal fluid has been tested, even though the Wassermann test upon the blood serum is negative and the patient is free from symptoms.

The examination of the fluid begins with its first appearance from the end of the spinal puncture needle. It is usual to collect three portions of the fluid in three sterile test tubes of uniform size. Into the first tube is run about 5 c.c. This is marked No. 1, and the contents may be used for the Wassermann test, direct smears or cultures. In the second tube is collected from 3 to 5 c.c. This is marked No. 2, and can be set aside for the formation of a pellicle, if desired. Into tube No. 3 is run about 5 c.c. This is the least likely to contain blood, and for this reason is used for making the cell count and colloidal gold test.

Spinal fluid can be sent to the laboratory in sterile containers similar to those provided by the Provincial Board of Health for sending blood for the Wassermann test.

Pressure The first detail to note is the pressure of the fluid within the subarachnoid space. For ordinary clinical purposes this can be determined by noting the force with which the fluid issues from the needle. Under normal conditions there is a rapid flow for the first few seconds, slowing down to

about 10 to 25 drops a minute. There is an increase in pressure in the acute and chronic meningitides, the character of the process and the degree of acuteness determining the increase.³ In paresis, tabes and cerebrospinal lues, the pressure is not constant, it is often increased.

Color. The normal fluid is crystal clear and colorless. In meningococcus meningitis it is turbid, varying from a slight opalescence at the onset to a yellowish green later. In pneumococcus meningitis it is more of a pearly grey, in contrast to the greenish yellow noted above. In influenza meningitis, the color varies from an opalescence to a distinct yellow. In poliomyelitis it is usually colorless, occasionally opalescent. In tuberculous meningitis it is clear, rarely opalescent. Xanthochromia or yellow spinal fluid occurs in the Froin or compression syndrome, a comparatively rare occurrence. Nammack⁴ contends that the pressure of yellow spinal fluid in acute or sub-acute conditions is strongly suggestive of tuberculous meningitis or poliomyelitis.

Foam. A foam, produced by shaking the fluid in a test tube and which persists for one-half hour or longer, is said by Levinson⁵ to occur in pathologic fluids. The foam is more abundant and more persistent in the acute meningitides.

Pellicle. A pellicle formation or a deposition of fibrin and cells occurs fairly constantly in various diseases. In acute meningitis it forms quickly, while in tuberculous meningitis it takes usually from 12 to 24 hours.

Cytology. It is not more difficult to make a cell count of the spinal fluid than it is to make a leucocytic count of the blood. It should be done as soon after obtaining the fluid as possible, and the specimen should be free from blood. The ordinary counting chamber with Turk or Neubauer ruling may be used. A diluting solution (methyl violet, 0.2 gm.; glacial acetic acid, 5 c.c.; water to 100 c.c.) is drawn up to the mark 1.0 and the spinal fluid, after having been gently shaken, to the mark 11. The cells within the whole ruled space are counted. This gives the number of cells per cu. mm. of fluid. A count above 10 may be considered abnormal. The greatest number of cells occur in infections of the meninges. A pleocytosis is also found in the chronic organic nervous diseases. According to

Craig² a pleocytosis occurs in 95 per cent. of syphilitic affections of the nervous system.

As regards the type of cell, it may be taken as a rule that in the acute inflammatory processes the polynuclear type prevails, whereas in the subacute or chronic conditions the mononuclears predominate.

Globulin. An increase in the globulin content indicates an abnormality, but a negative globulin test does not prove the absence of disease. The greatest amounts occur in surface infections of the meninges, while in the more deeply-seated lesions the increase is less marked. There are several globulin tests, the most reliable being probably the Noguchi.

Wassermann Test. Cerebrospinal involvement may occur early in the course of syphilitic infection.⁵ According to Fordyce⁶, 25 to 35 per cent. of syphilitics have positive findings in the spinal fluid during the first year of the disease. The Wassermann test is recognized as being of decided value in the recognition of syphilis of the nervous system. It is also of value, to some extent, in differentiating the various syphilogenic diseases, depending upon the quantity of fluid which yields a positive reaction. In paresis, it is usually positive in small quantities (0.2 c.c.). In cerebrospinal lues and tabes it may be negative in small amounts and positive in larger quantities (0.5 or 1.0 c.c.). A negative Wassermann in the spinal fluid is not conclusive proof of the absence of central nervous system involvement, as it is possible for blood vessel changes, of a syphilitic nature, to be present in the brain or cord with a negative test.

Colloidal Gold Test. This is of distinct diagnostic value, especially in the detection and differentiation of the various syphilitic diseases of the nervous system. It is the earliest reliable test found in the spinal fluid in paresis, and may be present before clinical signs.⁷ A typical reaction occurs in paresis of such constancy as to be considered diagnostic⁸; precipitation being complete in the first few tubes. In tabes, precipitation is greatest, but only partial in the first two or three tubes, while in cerebrospinal syphilis the greatest discoloration occurs in the third or fourth tubes. In tuberculous meningitis

the summit of the curve comes, usually, in the sixth or seventh tubes, whereas in acute meningitis the greatest change takes place in the seventh, eighth or ninth tubes.

Bacteriologic. This consists of direct smear examination, cultures, agglutination tests and animal inoculations.

Many other tests may be applied on occasion, but a working knowledge of those mentioned may be of assistance to the clinician in the investigation of his patients.

Conclusions. (1) A more earnest co-operation is urged between the practitioner and the laboratory worker with regard to the examination of the spinal fluid. (2) A complete analysis of the spinal fluid is of value in the early detection of syphilitic involvement of the central nervous system. (3) The patient's best interests are subserved only after a true interpretation and application of laboratory data.

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THE ACADEMY OF MEDICINE, TORONTO

INTERIM REPORT OF THE SPECIAL COMMITTEE OF THE COUNCIL ON THE GLOVER SERUM.

Your committee begs leave to present an interim report as follows:

At its first meeting, October 11th, 1920, the members of the committee were unanimously of opinion that it would be impossible to estimate the value of the treatment on the basis of the examination of fifteen cases selected by Dr. Glover from among the large number to whom the serum had been administered. Such a superficial and incomplete investigation would be of no scientific value, and therefore unsatisfactory alike to the medical profession, to Dr. Glover and to the public at large. It was therefore recommended that the scope of the committee be enlarged so as to include the examination of all available data, experimental and clinical, upon which Dr. Glover had based claims, which if substantiated, would mark an advancement in our knowledge of the causation and treatment of cancer, of the greatest importance. Your committee accordingly communicated its views to Dr. Glover, who previously had promised the Academy to present to the Fellows at an early date the results both of his experimental and clinical work.

The Council of the Academy approved of the wider scope of the investigation advised by the committee, and also of the collaboration of a number of eminent authorities in other centres, in the consideration of the data obtained by the committee and in the preparation of the report to be based thereon.

In view of the interest manifested both by the medical profession and the public, and the hope which had been aroused that an important contribution had been made to our knowledge of the causation and treatment of cancer, your committee was impressed with the necessity for proceeding with care and thoroughness to collect all available facts, to examine them critically but with open minds, in order to appraise as accurately as possible the value of Dr. Glover's work.

The claims which have been made by Dr. Glover may be considered under two headings—(A) Experimental; (B) Clinical.

(A) *Experimental Claims:*

- (a) That Dr. Glover has cultured cancerous cells and from them has isolated and cultured an intracellular organism which he has found confined to and present in every type of cancer.
- (b) That by inoculation of these cells and organisms, cancer has been produced in a number of animals, including pigeons, rats, mice, rabbits, guinea pigs, hens, etc., and that a number of medical men, including the Deputy Minister of Health of Canada, Dr. J. A. Amyot, had examined this material.
- (c) That by the injection of cultures of these cells and organisms "into the jugular vein of a horse of the roan type between the ages of seven and nine years" a serum has been obtained which when injected into experimental animals, renders them immune to inoculation by the cancer cells and organisms before mentioned. In other words, while the animals not treated by the serum develop experimental cancer, those previously treated by it are immune.
- (d) That the serum injected in cases of human cancer has been found capable of producing improvement or cure.

Your committee, therefore, regrets to report:

- (1) That Dr. Glover refused to permit a visit to his laboratories by representatives of the committee.

- (2) That he refused the request of the committee to be allowed to examine his cultures and experimental material at present available.
- (3) That he has not acceded to the request of the committee to demonstrate his ability to culture cancer cells and organisms.
- (4) That he has not acceded to the request of the committee to demonstrate his ability to produce cancer by inoculation, or to immunize animals against it.

Your committee therefore has no evidence to substantiate Dr. Glover's claims on the experimental aspect of the question under investigation.

(B) *Clinical Claims:*

Your committee has endeavored to collect information which would enable it to decide:

- (a) Whether Dr. Glover has succeeded in producing cures in cases definitely established as cancer (1) regularly, (2) occasionally.
- (b) Whether his serum produces improvement in cases definitely established as cancer, beyond that which occasionally occurs spontaneously or under palliative measures.

In order to answer these questions, your committee:

- (1) Has examined twelve of the fifteen cases selected by Dr. Glover and asked for an opportunity for re-examination of them in order to follow their course.
- (2) Has sought to obtain from the medical attendants of patients, confirmation of diagnosis and a statement as to the clinical condition of the patient before applying to Dr. Glover for treatment.
- (3) Has obtained from St. Michael's Hospital through Drs. J. D. Loudon and J. M. McCormack a list of cases treated in that institution. Only those cases were included in this list which had received at least five injections of serum.

- (4) Has sought to obtain from Dr. Glover a complete list of the cases treated by him privately, with notes of their progress and ultimate results obtained.
- (5) Has sought to obtain from the Fellows of the Academy, from hospitals and from practitioners at large, reports of the results of the serum treatment in cases which had come under their observation.

From the data above mentioned, as far as obtained, the committee has found no evidence to warrant the hope that a specific cure for cancer has been discovered by Dr. Glover, or that a cure has been produced by the serum in any case definitely established as cancer.

It has evidence, on the other hand, that many cases of cancer, both early and advanced, have progressed steadily downwards, the course apparently uninfluenced by the use of the serum.

In answering the question whether the serum produces improvement in cases definitely established as cancer, beyond that which occasionally occurs spontaneously or under palliative measures, the committee is confronted with a number of difficulties attendant upon the estimation of the value of any new form of treatment.

These may be summarized as follows:

- (a) Good results at times are obtained in cases supposed to be cancer, but in which the nature of the condition has not been established on incontrovertible evidence. In such cases, the usual conclusion of the medical attendant is *a priori* that his diagnosis was wrong, rather than that a cure of cancer had been effected.
- (b) Sufficient time must elapse to judge of ultimate results. Temporary improvement frequently occurs after the removal of mechanical obstruction by operation or by sloughing of a cancerous growth.
- (c) Retrogression or even spontaneous disappearance may occur in cases of cancer, so that it is not uncommon to get considerable temporary symptomatic improvement apart from any treatment.

- (d) Psychic influences are of great importance: this aspect of the case has been well emphasized by Weil, a well-known authority, as follows:

"Is it indeed, very remarkable that a patient who has been consigned to death as a victim of a hopeless malady, should regain his spirits and his appetite, when he is again confronted with the hope of a cure, and of the eradication of his disease? It is a phenomenon well known to every student of the disease that a large proportion of cases responds in just this manner to any treatment which is offered them. Osler has described a case of cancer of the stomach in which the mere visit to a consultant of sanguine temperament, though poor judgment, whose assurance of the patient that there was no possibility of cancer, resulted in a disappearance of all the symptoms and a gain of eighteen pounds in weight. It is this psychic influence, which has occasionally deluded the honest student of cancer cure, and which has also so generously played into the hands of the dishonest."

It is scarcely necessary to point out that when an investigator claims to have made certain discoveries and these of fundamental importance, before they can be accepted by scientific men, the fullest opportunity must be afforded for investigating the data upon which such claims are based, with details of methods sufficiently definite to permit of the repetition of the experiments by independent workers, and that failure of an investigator to submit his work to the recognized canons of science must tend to its being discredited.

The data which your committee has been able to obtain have not convinced it that the results of treatment obtained by the use of Dr. Glover's serum are better than those obtained by similar methods introduced by others, and which have ultimately disappointed the hopes entertained of them.

In concluding this interim report, your committee wishes to state its readiness to examine any data not yet submitted, but which Dr. Glover may decide to place before it, and to collaborate in their findings with recognized authorities who

have already expressed their willingness to do so, or with others whom Dr. Glover himself may nominate.

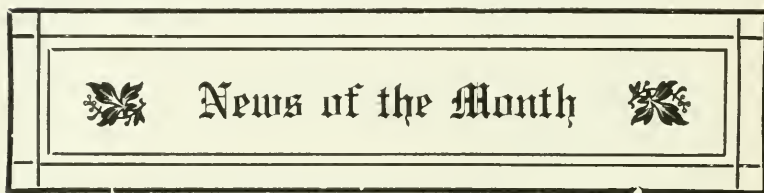
All of which is respectfully submitted.

W. H. HARRIS, *Chairman*; H. B. ANDERSON,
HERBERT A. BRUCE, JOHN J. MACKENZIE,
JABEZ H. ELLIOTT (*ex officio*), HARRIS MCPHEDRAN, *Secretary*.

The undersigned, who were added to the committee, concur in the above report: GEOFFREY BOYD, W. P. CAVEN, A. PRIMROSE.

Presented to the Council of the Academy and adopted. January 13th, 1921.

J. H. ELLIOTT, *President*; F. C. HARRISON, *Hon. Sec'y*.



PROPERTY BOUGHT FOR A NEW CHILDREN'S SHELTER

For the erection of a Children's Shelter property has been secured by the Children's Aid Society, Toronto, at Stop 34 Yonge Street, Hon. George S. Henry declared in presenting the report of the Society at the session of the County Council on February 4th. A thirty-five foot lot has been secured at the price of seven thousand dollars. Improvements, it is expected, will cost twenty-five hundred dollars, a total expenditure of ninety-five hundred dollars. The report showed that 135 children had been taken care of by the Society since its inception.

DR. GEORGE M. CAMPBELL, one of the leading physicians of Halifax, died on Dec. 12th after a brief illness. He was fifty-nine years of age.

INCREASED GRANT FOR TUBERCULAR SANATORIA

REPRESENTATIVES of the Tubercular Sanatoria of the Province waited on February 4th on the Provincial Secretary and asked that the Government grant to these institutions in payment of maintenance cost be increased from 50 cents a day to \$1.00 per day. The deputation pointed out that in 1916 the cost per patient was \$1.15, whereas last year it was \$2.20.

INTERNATIONAL CONGRESS OF MILITARY SURGERY AND CHEMISTRY

An International Congress of Military Surgery and Chemistry, to which the co-operation of all doctors and chemists belonging or having belonged to the armies is solicited, is being organized by the Medical Service of the Belgian Army, to take place at Brussels in the month of June, 1921.

At the close of the great events which upset the world between 1914 and 1918, it is interesting to sum up the work of the several Medical Services and to combine, with a view to common progress, the lessons learned by every and all; it is also useful to determine the attainments of Army Medical Science during the war so as to be able to condense them into teachings for the future.

The following questions have been set down for discussion:

- (1) Lessons of the war on the treatment of fractured limbs;
- (2) Anti-venereal and anti-tuberculous measures in the Army;
- (3) Chemical and physiological study of poisonous gas.—Consequences of its action on the organism—Importance of these consequences as to the estimation of disablement;
- (4) General organization of Army Medical Services.

Contributions to the Congress, as also papers and correspondence on the above-mentioned subjects will be received until April, 1921, by the General Secretary of the Congress, Dr.

Jules Voneken, Hôpital militaire de Liège (Belgique). A short summary of the papers should be mailed to the same address.

DR. N. McLEOD HEGGIE, Jacksonville, Florida, was elected President of Duval County Medical Society, Dec. 7th, 1920.

Theophrastus Bombastus Von Hohenheim, called Paracelsus.

His personality and influence as Physician, Chemist and Reformer. By JOHN MAXSON STILLMAN, Professor of Chemistry Emeritus, Stanford University. Chicago and London: The Open Court Publishing Co. \$2.00.

This latest book on Paracelsus is a little volume of 180-odd pages, well got up in boards, printed in large, clear type, upon good paper, and illustrated with a number of pictures of the subject, and with a photograph upon the cover of the painting by Jan Wildens, a pupil of Rubens, or possibly copied from one in the Louvre ascribed to Scorel in 1517 and formerly to Dürer. The author or compiler has been at pains to rehabilitate Paracelsus and rescue him from his defamers, by disposing of his detractors. But the world will probably continue to regard him as the victim of his own vagaries alike in space and in thought; and even if our common word *bombast* be not derived from his family name, certainly he possessed, in full measure, the quality it now implies when he called himself Paracelsus—the twin, or the outstripper, or the protagonist of Celsus! He was the son of Wilhelm Bombast von Hohenheim, a physician of Einsiedlen, who had a struggle for existence, and his mother, superintendent of the hospital of that town until her marriage. He had no respect for authority in medicine or philosophy, but was a confirmed astrologer; and although he wisely taught the value and necessity of observation and experiment as the basis of theories, he had not the wit to realize with Bacon, who was born just twenty years after Paracelsus died that “they be the best Cheirurgens, who, being learned, incline to the traditions of Experience; or who being Empirics incline to the methods of Learning.” Paracelsus was the Prince of Empirics and Peripatetics in Philosophy, Physics and Physic.



Correspondence



The Editor cannot hold himself responsible for any views expressed in this Department.

We print below a letter anent a recent editorial in this journal. We only hope the publicity we give to it may lead our readers to secure the numbers of the *Lancet* in which Dr. John Ferguson exposes the absurdities in Mrs. Eddy's Book on *Science and Health*. It is not necessary for us to present any arguments to our readers against Christian Science, further than to say that fundamentally it is neither Christian nor scientific. The Author of the Christian religion recognized disease as a distinct abnormal physical condition—not a metaphysical abstraction—and Christianity, as represented by the Church, has the dynamic which has given to the world our hospitals, dispensaries and other institutions for the relief of suffering and the cure of the disabled; and to such Christian Scientists as Pasteur and Lister, who by genuine scientific investigations have given us the clue to the causation and treatment of so many real diseases.

As Mary Baker Eddy and her cult disagree with Jesus Christ and with the world's outstanding *Christian Scientists*, how can any rational being look upon their propaganda, taken as a whole, either as Christian or scientific?—Ed.

EDITOR, *The Canadian Journal of Medicine and Surgery*:—

It is surprising that your Journal should degrade its standard of decency and dignity by commending the attacks of the *Lancet* against Christian Science. Anything more futile, intolerant and narrow it would be hard to find. The Christian Science text-book, "Science and Health with Key to the Scriptures," by Mary Baker Eddy, has been appraised by editors, clergymen, lawyers, judges and by scholarly physicians as a very remarkable work. Yet Dr. Ferguson has written of it as if it were a long-drawn delirium, and as if the millions who have read and studied it with benefit, are lunatics at large. It is regrettable that you deem such an article "informative" to your profession; it needs to eliminate bigoted materiality from its system, and an increase of spirituality is the remedy indicated and recommended.

Years ago, in a magazine article, the late Dr. Osler presented the view that faith is three-fourths of the stock in trade of anyone who attempts to heal the sick—whether faith in drugs, in the physician, in Christian Science or in God. And you quote Ambrose Pare as declaring regarding a case cured: "I tended

him; God healed him." You also acknowledge the cure of certain organic diseases without medication as due to the *vis medicatrix naturae*, and supposedly you "look from nature up to nature's God." Surely the intelligible Principle of real healing is divine Mind, as was demonstrated by the prophets, by Christ Jesus, by his disciples,—and in the early Church for over three centuries, according to Gibbon.

Anyone who will investigate Christian Science with the object of discerning the truth that causation is spiritual, that harmonious physical effects result from spiritual harmony,—from the consciousness of the omnipresence of infinite good, God,—will not fail to find instances of the healing of all sorts of diseases by Christian Science. Former physicians are among those who bear testimony to this, from Luke, the beloved, to those of our own day who have found Christian Science to be the more excellent way.

Sincerely yours,

GEORGE R. LOWE.

Christian Science Committee on Publication for Ontario.

Pathogenic Micro-Organisms. A text-book of microbiology for physicians and students of medicine. By WARD J. MACNEAL, Ph.D., M.D., Professor of Pathology and Bacteriology and Director of the Laboratories in the New York Post-graduate Medical School and Hospital, New York. (Based upon Williams' Bacteriology.) With 221 illustrations. Second edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street.

In this volume of about five hundred small pages, the field of Bacteriology and Parasitology is covered in the essentials. The book is well written and well illustrated, and answers all the requirements of the student and practitioner. It has been brought up to date and can be recommended to those who require such a volume for their library.

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No. 3

Editorial

DR. N. A. POWELL

HAVING reached the age limit—which we shall not mention—Dr. N. A. Powell has retired gracefully and in good spirits from the Chair of Medical Jurisprudence in Toronto University, which he has filled for many years so acceptably.

All too often are words of eulogy pronounced too late. We prefer not to err in that direction, but rather to express our appreciation of a man's meritorious service at the time he drops his main activities in academic or professional life.

The subject of this sketch is an all-around man—being finely developed physically, mentally and spiritually. He has familiarized himself with all kinds of practice—in every department of medicine. He has practised in the country and in the city, among the rich and among the poor. Though he has

done all phases of general practice he has always had a *penchant* for surgery, being conspicuously successful in fracture work. He has an especial and unique knowledge of all sorts of surgical instruments and appliances, and is familiar with many little practical expedients in technique which are of great value to any man undertaking surgical work.

As a member of the University professorial staff in surgery and of the Toronto General Hospital, Dr. Powell's lectures were marked by fine delivery and were very practical. The attention of his students, both in jurisprudence and surgery, was always riveted by the clear and clever presentation of his subject.

He often had an apt illustration or story with which to clinch his point. This characteristic prevailed, not only in the lecture room with students, but also in the Academy of Medicine, in meetings of various boards on which he served, and at social gatherings.

The writer does not know Dr. Powell sufficiently well to speak of the varied activities in which he was interested. A few, however, were: all the medical societies and associations in Canada, and some in the United States, in several of which he held offices, even the presidential chair; the establishing of the Muskoka and Weston Sanatoria, on the Board also of which he served; the Canadian Bird Society, of which he is a life member, and was last year vice-president; the Esculapian Club, over which he presided one year; the Voluntary Com-

mittee formed for the establishment of a Medical College in connection with West China Union University. These represent only a small fraction of the good works in which Professor Powell has interested himself.

Dr. Powell is a believer in relaxation and recreation. He is a mighty hunter, a successful fisher, and a good yarn spinner. He is a splendid amateur photographer, having secured some especially fine out-of-door photos.

Dr. Powell has been especially interested in Y.M.C.A. work, particularly among the University students. We know of no one on the teaching staff who has done more than he to boost this very commendable work among the student body.

He has given much of his time and means to philanthropic work, because, like Abou Ben Adhem, he loves his fellow man in spite of the fact that he likes to take a rise out of them on occasions.

Many a committee meeting of the Faculty or Academy, or of one of his numerous boards, has the tedium or friction been relieved by a witty sally of his. After the merriment subsided the business in hand was resumed with increased zest.

Dr. Powell numbers among his friends and admirers hundreds of the proletariat; but, fortunately, he has had not a few wealthy friends.

One of the finest—if not the finest—emergency hospitals in America—The Shields Emergency, which stands in the grounds of the Toronto General Hospital—exists because of the efforts of Dr. Powell.

He was physician to two elderly ladies of means, and succeeded in inducing them to provide the money for the building which stands as a noble monument to them. The planning and equipping of this beautiful structure was a labor of love to the doctor, as has been the directorship of its activities since its completion.

Dr. Powell has been a frequent contributor to medical periodicals for forty years. This journal, of which he is one of the editors, has reproduced a goodly number of them. He writes in an engaging style and always gives plenty of meat, not forgetting the sauce.

Now that Dr. Powell is coming into a bit of well-earned leisure we should like to see him try his hand at a book of the type of "Over the Teacups." We feel sure he could produce a volume as interesting, instructive and stimulating to the profession as did the beloved O. W. Holmes.

MARRIAGE LICENSE VENDORS

THE manifest aim of the Ontario Government is that its servants shall be qualified and efficient in the performance of their duties. One proof of this aim is furnished by the Public Service Superannuation Act of last Session providing for promotion in their ranks and a somewhat more adequate remuneration for their services. Another proof may be found in the proposed instruction of magistrates

in their somewhat simple legal duties, and still another in the foreshadowed legislation to have a more capable and better qualified class of marriage license vendors. It is on this question that the medical profession would respectfully offer a suggestion.

Why should there be any marriage licenses for anyone? What is the object of such licenses? Clearly to secure a degree or standard of suitability in both parties to the contract. Has this ever been accomplished by marriage licenses? Practically no. Why? Because the vendors have never been qualified. The Government now proposes to have them at least better qualified by placing the duties of vendors in the hands of their instructed magistrates. What qualifications should vendors of marriage licenses possess? A knowledge of the physical and mental health of the contracting parties and a knowledge of the laws of heredity. Will instructed magistrates understand these things? Some few may, but long years of study must be devoted to these matters before anyone can have much valuable knowledge of them. Who, then, have that knowledge? Everybody knows something about good health and soundness of mind, and everybody acknowledges the commanding importance of the laws of heredity. If medical men spend their lives in the study of these subjects why not place in their hands the responsibility for which their long years of investigations have qualified them and make them the vendors of marriage licenses?

If medical health officers throughout the province were invested with this most important function the whole matter would then be resting on fully qualified and scientific servants, and the procedure would be so eminently practical that the rest of the civilized world would soon follow.

In a few years defectives and degenerates would be largely eliminated at the source, and a very large percentage of insanity and crime would automatically disappear.

While on the threshold of one of the most beneficial laws which can be enacted, the Government would be well advised if, instead of taking half a step forward and making marriage license vendors magisterial, it would take a whole step and make them medical.

Incalculable misery and suffering would be averted, and much of the treasure now required to maintain these classes would then be saved.

CONGRATULATION

WE heartily felicitate Dr. J. H. McConnell upon the verdict of the coroner's jury in the case of the two women to whom he, through the fault of an assistant, unfortunately administered the wrong drug. The jury completely exonerated him. During those several days of suspense, none of us knows what Dr. McConnell suffered. Those of us who knew

him intimately could guess. The strain must have been terrible.

Dr. McConnell's confreres felt much sympathy for him over the terrible mishaps and gave expression to the same freely; and now that the matter, as far as he is concerned, is cleared up, they rejoice with him that he was not at all to blame in the matter.

Canadian Journal of Medicine and Surgery

Toronto

Canada

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Reprints, including halftones, etc., supplied authors at net cost.

Original Contribution

PROBLEMS IN MEDICINE

JOHN HUNTER, M.B., Toronto
(Temporary address, Los Angeles, Cal.)

THE fateful 2nd of November settled the great Presidential contest, apparently to the satisfaction of a vast majority of the electorate, and also, for the present at least, the following medical problems, viz.: 1st, perpetuation of vaccination and of vivisection by overwhelming majorities; 2nd, the rejection of a request from the chiropractors to establish colleges, and to grant, without government supervision of the qualifications, their own degrees and licenses. *En passant*, the elections were even less turbulent than many of our own Academy ones. The vote, in political parlance, smashed all previous records as to the number who voted, and "the females of the species," who had the privilege, for the first time, of casting their votes in a party contest, apparently "rang as true" to partizan affiliations as the masculine voters. There is a great field for political pathologists to find out the cause, or causes, of party bankruptcy and the preventive measures. Like our own Grit and Tory parties, once so strong, now almost begging their own partizans to stay in the ranks, the Democrats seem "down and out."

The solution of the medical problems suggests many interesting facts for the medical profession in our own province. The irregular "cults" put up a strenuous fight, especially against vaccination and vivisection. Space will only permit a very brief reference to the arguments used, verbally and written, and leave the reader to apply the old classic maxim, *ex uno disce omnes*. This sentence was quite typical of the attitude

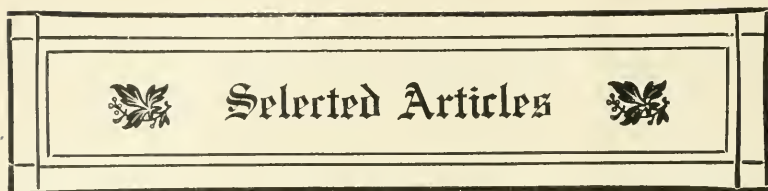
taken in the whole letter. "If the human race cannot be preserved without resorting to the awful horrors of vaccination, and the tortures from vivisection, then let the race perish from off the earth." The first reports from Los Angeles were very favorable to the "cults," and many physicians were complaining of the indifference and of the lack of interest and want of organization amongst medical men. The "cults" were highly organized in the city and spent money lavishly. However, many physicians in Los Angeles and throughout the state set a noble example to their fellows, and by occupying the pulpits in the largest churches, on the platform, to "out-door" crowds, and articles in the press, so educated the electorate that when the final returns came in from all over the state, it was found that the majority had voted intelligently, and that vaccination and vivisection were sustained by overwhelming majorities. Our own Medical Health Officer, Dr. Hastings, came in for great praise for some addresses he gave when on a recent visit to this city and state.

Ontario, with perhaps the exception of vivisection, is practically face to face with the same problems. The physicians of California have given us a splendid object lesson. Every county in Ontario should have a very active medical association, and the men who stayed out should be made to feel that they were medical degenerates. Doctors should not hesitate to use pulpit, forum and press to educate the public on what scientific medicine has done and is doing for the health and well-being of the people. The Sunday before the election the writer heard one of the city physicians give a short address just before the sermon, on what scientific medicine had done in regard to plagues, and in the recent war, and he was listened to with the most rapt attention. The "cults," like the plagues, can only flourish in ignorance and in darkness. Let the physicians of Ontario educate the people and the "clacking" of the whole legion of illiterate and avaricious quacks would soon follow the fate of the wild pigeon. A story was told that very aptly expresses the value of organization. "In the old stage-coach days the drivers became very expert with the whip. A driver was displaying his skill on the ears of the mules.

when a passenger called his attention to a hornets' nest and asked that 'a crack' be taken at it. The reply came promptly, 'No, sir, them be organized.'"

MEDICAL MEETINGS.

The Southern California Medical Society held its sixty-third semi-annual meeting on November 5th and 6th. These were well attended and many interesting papers read and discussed. Two very interesting features were noticeable, the splendid part taken by quite young looking men, and the subject of the president's address. The title was, "The History and the Philosophy of Disease and the Forces Evolving in the Fight for the Preservation of Health." In this age, with its furore for everything new, we sorely need to be held in leash by what actual experience and true science have already established. To-day every new serum, or vaccine, or theory, or focal infection must be exploited. Every child in a large orphanage must have the tonsils removed with as great despatch as a row of lambs is slaughtered. A very real and substantial service could be done to medicine if our medical colleges and societies would assign to scholarly men the task of giving addresses, setting forth what has been accomplished already in the science and in the art of medicine. Such information would be a great aid in standardizing the practice of medicine, to real work in the relief of suffering, and in the prevention of disease, to bring back once more the idealistic "family physician." To-day the patient—especially if financially equal to the process—is passed along from specialist to specialist to see what diseases can, or cannot, be discovered. A Wassermann, X-ray, blood pressure, test meal, spinal puncture made. Brain, ear, nose, eyes, throat, stomach, gall-bladder, kidney, intestines and genito-urinary organs each in turn to be examined by a specialist. Medical progress is both desirable and legitimate, but the exploitation of patients for either scientific or mercenary purposes degrades medical practice. The ancient Israelites were enjoined to rehearse to their children the great achievements in the past history of the nation, so our medical leaders should rehearse to the younger men the great triumphs that have been accomplished in the science and in the art of medicine in past ages.



ISOLATION vs. MEDICAL ASEPSIS

EXPERIMENTS MADE IN THE HANDLING OF INFECTIOUS DISEASES IN FRANCE, IN ENGLAND AND IN GERMANY POINT THE WAY TO THE COURSE OPEN TO MODERN AMERICAN HOSPITALS.

THE close of the last century found the medical world wavering between two standards in the treatment of infectious cases; the established practice of isolation, and the new theory of medical asepsis. Isolation had come into recognition and universal practice as an accepted and indispensable course. Medical asepsis was only just beginning to be emphasized as a precaution without which isolation was futile. The technique of medical asepsis, as is well understood, involves the scrupulous avoidance of contact and the careful sterilization of all contaminated objects.

During the first decade of the present century the theory of medical asepsis won considerable favor; and now, near the close of the second decade, it is an established practice in the modern hospitals of France and England, where experience has shown that cross-infection, even without isolation, is almost negligible where medical asepsis is properly observed. On the other hand, it has shown with equal clearness that isolation without medical asepsis is distinctly inadequate.

It was in 1888 that medical asepsis was first definitely urged upon physicians by Dr. Grancher, of the Hospital des Enfants Malades, of Paris. In the following year he supplemented his original views with the assertion that his observations showed that the individual isolation of measles patients, and the isolation of diphtheria in a special pavilion, did not reduce either

cross-infection or mortality. Ten years of painstaking study followed, from 1890 to 1900, at the end of which Dr. Grancher concluded that isolation without medical asepsis was useless and that the rules of asepsis should be rigidly enforced in the treatment of infectious diseases. His conclusion is well borne out by the results obtained at the hospital where he was able to test his theories.



A Ward in the North-Eastern Hospital, London, showing the Bed Isolation System, where Asepsis is Enforced in the Treatment of Infectious Diseases.

EXPERIMENTS IN FRANCE.

According to the report of Dr. D. L. Richardson, of Providence, the Hospital des Enfants Malades was a general hospital for children. Dr. Grancher admitted to its wards diphtheria, scarlet fever and measles patients among the miscellaneous diseases. He surrounded these patients' beds with a wire screen and within this enclosure were kept the nursing utensils for each patient. A special gown was donned by every one passing the barrier, and on leaving the hands were washed. In these wards 6,541 patients were treated. Diphtheria was admitted forty-three times, and only one case developed. Scarlet

fever was introduced, and seven cases resulted. Less success was obtained with measles, but Grancher was satisfied that even measles was not conveyed by the air. Dr. Moizard, who was connected with the same hospital, reported that in 1900, among 5,016 children suffering from contagious diseases only seven cases of cross-infection occurred. Six were cases of measles and one of diphtheria. Individual isolation and medical asepsis were practised. It was on the strength of these experiments



A Bed and Equipment in an Isolation Hospital Ward, where Aseptic Conditions are Rigorously Observed.

that the money was raised for the building of the Pasteur Hospital.

This hospital admits every type of infectious disease, including smallpox. Among 2,745 patients admitted, there were 524 cases of smallpox, 136 of measles, 443 of diphtheria, seven of hydrophobia, 163 of erysipelas, and 192 mothers with sick children or children with sick mothers. In all, only eight cross-infections occurred, five of smallpox, two of erysipelas, and one of diphtheria. Between 1900 and 1905, 5,000 patients were

treated, with a cross-infection rate of two per thousand; figures which amply demonstrate the correctness of Dr. Grancher's contention.

THE "BARRIER SYSTEM" IN ENGLAND.

The introduction of aseptic nursing in Europe followed close upon the successful experiments conducted by Dr. Grancher. It was in 1902 that the first attempt at medical asepsis was made in England. This was at the Monsall Hospital in Manchester, under the superintendency of Dr. A. K. Gordon. The "barrier system" of isolation was here employed. The isolating systems are subject to great variation in European hospitals, but everywhere the aseptic methods remain about the same.

The "barrier system" is effected by putting a screen about the bed of the patient, marking it by a tape stretched between two upright posts at the foot, or by hanging on the bed an identifying card. The "room" or "bed" system consists of separate rooms with complete partitions. The "cubicle" system involves isolation in rooms with low partitions between them. In the "isolation block" the rooms communicate with each other by means of an open air corridor.

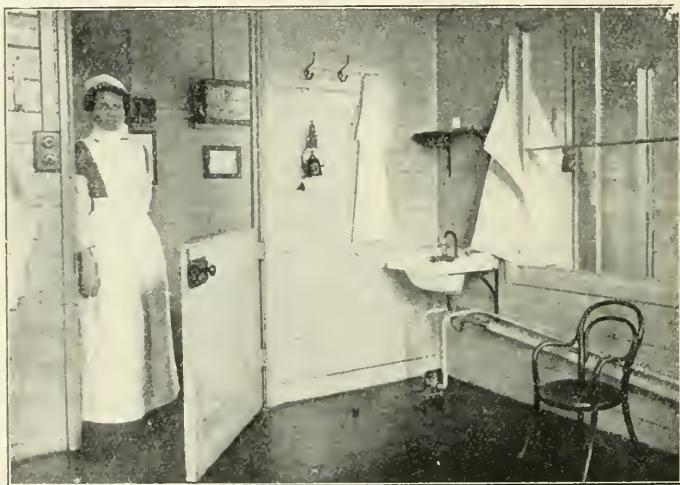
In all of these varying systems, however, the aseptic nursing methods are the same. In the Monsal Hospital, where the "barrier" system was installed, any bed in the ward was selected and about this bed was placed a screen on which were hung sheets wet with some disinfecting solution. Later these wet sheets were found superfluous, and tape was merely stretched at the foot of the bed to indicate that it was a barriered case. Aseptic conditions were observed rigorously by all who came in contact with the patient.

CONDITIONS IN GERMANY.

A careful observer, studying hospital conditions in Germany, found that there were no contagious disease hospitals outside of the large cities. This, he believed, was due to the fact that it is impracticable to maintain a hospital of this type in a small town. Such a hospital is generally the outcome of the fear engendered by a sudden epidemic, but when the epidemic

is passed, the hospital usually proves little else than a white elephant on the hands of the community. It is generally dismantled, the staff is discharged and the building remains idle and useless. The consequence is that, when contagious cases arise thereafter, they are sent to the first available hospital, and the danger of infection is ever present.

Contagious diseases in Germany were cared for in general hospitals in the ordinary course of events, showing that confidence in the efficacy of medical asepsis is complete. In the



A Portion of a Boxed Room of a Ward, where the "Cubicle" System of Isolation, with Low Partitions between the Rooms, has been Adopted.

hospitals that this observer visited, there were few private rooms, contagious cases being lodged in the wards with the ordinary cases. Sometimes their beds were blocked off from the others by a screen. This screen was either the conventional hospital screen or one made of wire, and in some instances isolation was effected, or rather indicated, by running a wire screen around the cot. There seemed to be a general indifference to the methods of isolation as unimportant, but the rules of asepsis were very minutely carried out. These were practically the same as had been found effective in France and England.

In every case the patient had his own private utensils, towels and other necessary articles, and these were carefully preserved for his individual use. By the side of each bed was an over-dress for the use of the nurse, and in some cases an additional pair of gloves. The principle observed in each instance was that everything that approached the area of the patient was exposed to infection and should be sterilized before being used. With this in mind, each patient was supplied with disinfectants generally cresol or weak formaldehyd solutions. Any article removed from the vicinity of the patient had to be sterilized first. As a consequence of this method of aseptic nursing, nurses and attendants felt free to move about as they pleased in the ward, mindful only of the immediate area of infection. Special attention was given to utensils for eating and drinking. Provisions were made in each ward, and often in each individual area, for burning cloths used for the collection of sputum, etc. In several instances unconsumed food, cloths and papers were collected in a paper bag and sent to the incinerator.

THE LESSON FOR AMERICA.

European experience points the way to the course open to modern American hospitals. Particularly is this experience of value to the general hospital, in view of the fact that it demonstrates beyond dispute that contagious disease can be adequately treated without danger to the other patients provided the rules of asepsis are strictly observed. In any case, this subject is bound in the immediate future to command the attention of hospital authorities, as it will immeasurably increase the value of the general hospital to the community by increasing its usefulness without adding to its complications. Often an infectious case finds its way, without the knowledge of the authorities, into the general hospital. In the past such cases have exposed the other patients to great danger; but if aseptic methods are observed this patient is no longer a menace to the others and can be adequately looked after wherever he may be. In a word, medical asepsis can be made a blessing if faithfully applied in any hospital, however modestly equipped it may be.—*Red Cross Notes.*



News of the Month



TRADE MARK DECISION

On the 6th of November, 1920, the Exchequer Court rendered judgment in the action between the Bauer Chemical Co., Inc., plaintiff, and Sanatogen Company of Canada, Ltd., of Montreal, defendant, perpetually restraining the defendant from infringing the trade mark of the Bauer Chemical Co., Inc., for "Sanatogen" and "Formamint," registered in the office of the Registrar of Trade Marks, in the Department of Trade and Commerce at Ottawa. The judgment also restrains the Sanatogen Company of Canada, Ltd., from selling or offering for sale in Canada pharmaceutical preparations, not being the plaintiff's goods, marked with the trade mark "Sanatogen" or "Formamint," or having thereon the label of the Bauer Chemical Co., Inc., of New York City. The Sanatogen Company of Canada, Ltd., has announced that it will appeal from this decision.

It is announced that Dr. Ernest L. Armstrong, a former Londoner, but who is at present located at Baden, Ont., has been appointed Assistant Pathologist at the London Institute of Public Health. He succeeds Dr. Earl W. Watson, who resigned to accept a position on the staff of the University of Sheffield, Eng. Dr. Armstrong held for some time the position of assistant in the department of anatomy in the Western University.

Obituary

DR. C. E. GRAHAM, PROMINENT PHYSICIAN OF HULL, DIES

DR. CHARLES EVERETT GRAHAM, one of the pioneer residents of the city of Hull, who played an important part in the history of its early development and was a large property owner in the city, passed away on January 13th, after a brief illness.

He was born at Kingston, in 1844, and was graduated from McGill College in 1865, with honors, and in 1866 took up the practice of his profession in Hull. In 1872 he was appointed a Justice of the Peace and became Mayor of the city in 1873, and served until 1879.

DEATH OF DR. HUGH MACALLUM, LONDON, ONT.

PNEUMONIA, which developed after he had made a professional visit, resulted in the death at his home in London, on January 25th, of Hugh A. Macallum, M.D., LL.D., M.R.C.P., one of the most distinguished physicians in western Ontario.

Dr. Macallum, who was born in Westminster township sixty years ago, was a brother of Prof. A. B. Macallum of the University of Toronto, formerly of the Canadian Advisory Council for Scientific and Industrial Research, and of Prof. Neil Macallum, University of Michigan. The doctor commenced life as a school teacher in Norfolk county, but two years later removed to London to study medicine at Western University. He graduated as gold medallist in 1886 and took post-graduate work in Johns Hopkins Hospital, Baltimore, and in New York and Old London, where he became a Member of the Royal College of Physicians.

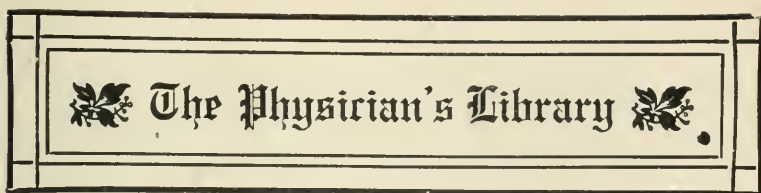
THE death occurred suddenly, on January 26th, of Joseph Hughes Webb, M.D., one of Waterloo's oldest and most widely-known citizens.

He was born near Aurora seventy-four years ago, and his boyhood days were spent on the farm. He was sent to the Newmarket Grammar School, then went to the Normal School in Toronto, and after graduation there entered the teaching profession.

After three years he took up the study of medicine and was graduated with honors under Hon. John Rolph, M.D., LL.D., from Victoria College, in 1870. He came to Waterloo, where he had since practised successfully. He became associated with the Mutual Life Company of Canada in 1881 as Associate Medical Director, and in 1885 was made Medical Director.

DR. T. GRAY, a popular and successful physician who had practised at Acton for the past twenty years, passed away on the evening of January 24th, after four months' illness. Dr. Gray was a native of Edinburgh, a graduate of McGill Medical College, and took post-graduate work in Edinburgh, London and Glasgow. He practised for a time in Newfoundland, then for a few years at St. Mary's and Parkhill, and in 1900 went to Acton.

WE would like to take this opportunity of extending to our esteemed confrere, Dr. J. T. Fotheringham, our sincerest sympathy on the death of his wife at her home, 20 Wellesley Street, Toronto, on January 24th. Mrs. Fotheringham was well known as an active member of many organizations, particularly as Honorary President of the Woman's Auxiliary of the Canadian Army Medical Corps, of which she was one of the organizers in 1914. Mrs. Fotheringham was a sister of Dr. Donald McGillivray, and was married to Dr. Fotheringham in 1891. She is survived not only by her husband but by two daughters and one son.



Chemical Pathology, being a discussion of general pathology from the standpoint of the chemical processes involved. By H. GIDEON WELLS, Ph.D., M.D., Professor of Pathology in the University of Chicago, and in the Rush Medical College, Chicago. Fourth edition, revised and reset. Philadelphia and London: The W. B. Saunders Company. Canadian agents: The J. F. Hartz Co., Limited, Toronto. 1920. Price. \$7.00 net.

The new edition of this valuable work is enlarged to include chapters on anaphylaxis and allergy and deficiency diseases. There are many minor changes and additions, bringing the subject matter up to date. This work is unique in the field it covers and should most certainly be in the hands of all who are interested in pathology and its chemical aspects. The author has been careful to give references for all his statements and includes a bibliography or indicates where one may be found.

The Endocrines. By SAMUEL WYLLIS BANDLER, M.D., F.A.C.S., Professor of Gynecology in the New York Post-Graduate School and Hospital. Philadelphia and London: The W. B. Saunders Company. Canadian agents: The J. F. Hartz Co., Limited, Toronto. 1920. Price. \$7.75 net.

This book has been written, according to the author, with the hope of "putting the basic principles of endocrinology, and many of the questions which hold out promise of solution, into the hands of interested medical men."

The book is a series of chapters occupying in all about 300

pages, deals in a most general way with certain topics, such as environment and heredity, the story of the endocrines, internal secretions, skin affections and the internal secretions, instincts and emotions, mental and nervous defects, metal deficiency and criminality, neuroses and psychoses, the automatic nervous system, the history and clinical symptoms, clinics, cases, etc.

The profusion of generalities nullifies to a large extent the possible value of the more specific portions of the text in this volume.

The physician is much less likely to gain an adequate insight into the functions of the endocrines from reading this book than he is from making himself familiar with the subject as presented in any one of the best text books of physiology.

Text Book of Nervous Diseases, for the use of Students and Practitioners of Medicine. By CHARLES L. DANA, A.M., M.D., LL.D., Professor of Nervous Diseases in Cornell University Medical College; Consulting Physician to Bellevue Hospital; Neurologist to the Woman's Hospital; Consulting Physician to the Manhattan State Hospital; ex-President of the American Neurological Association; ex-President of the New York Academy of Medicine; Corresponding Member of the Societe De Neurologie, etc. Ninth edition, with two hundred and sixty-two illustrations, including four plates in black and color. New York: William Wood and Company.

This ninth edition of Professor Charles L. Dana's work on nervous diseases will be especially welcome to all who have been long acquainted with the author, on account of the anticipated advances and modifications in neurological studies during and since the late war. His view is that the so-called shell-shock which was then so common in its varied forms of stuttering, blindness, deafness, ties, and paralysis, had in it many of the elemental characteristics of hysteria, and that when these cases were separately examined they disclosed very little that

was new to neurology. The most important single exciting factor in the causation of the majority of these cases was commonly a powerful negative emotion, especially fear, often combined with certain concepts, as exemplified by such complex states as excitement, anxiety, sorrow and regret. While physical injuries in many cases played an important role, the war-hysteria was often traceable to a sub-conscious desire to get away from the front.

The whole work constitutes a complete, exhaustive and authoritative treatise on nervous diseases, of six hundred octavo pages, profusely illustrated with a wealth of appropriately designed plates, which serve to make the whole subject clear and plain.

Measure Your Mind—The Mentimeter and How to Use it. By M. R. TRABUE, Ph.D., and FRANK PARKER STOCKBRIDGE. With illustrations in text. Doubleday, Page & Co., Garden City, New York and London, 1920. Agent for Canada: Mr. S. B. Gundy, 25 Richmond Street West, Toronto. Price, \$3.00 net, postpaid.

This volume makes good reading, not only for the psychologist and the educationist, but will be found of much interest to the average practitioner. What is measured is not acquired knowledge but the ability to acquire knowledge. By means of the test described the psychological department of the American army in the late great war were enabled to suggest posts for officers and privates in quite a satisfactory manner. These tests were not intended to replace other methods of judging a man's value to the service. They did not infallibly tell what kind of a soldier a man made: they helped to do this by measuring the intelligence. They do not measure loyalty, bravery, power to command or the emotional traits. These in the long run are far more likely to be found in men of superior intelligence than in men of inferior intelligence. Apart from physical fitness, perhaps the most important single factor in a soldier is his intelligence.

We hope this book will be widely distributed in Canada.

Practical Preventive Medicine. By MARK F. BOYD, M.D., C.P.H., Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Philadelphia and London: The W. B. Saunders Company. Canadian agents: The J. F. Hartz Co., Limited, Toronto. 1920. Price, \$4.00 net.

The author states the obvious fact that doctors can play an important rôle in preventive medicine, but they are neglecting their opportunities. His object is to bring home to medical students and practitioners a realization of their public health responsibilities and stimulate co-operation with public health authorities. He does not claim any originality of material; he has compiled freely—especially from Rosenau's "Preventive Medicine and Hygiene." His book deals broadly with a discussion of diseases due to micro-organisms; deficiency diseases; occupational diseases; hygiene of infancy and childhood; heating and ventilation; personal hygiene; domestic sanitation; dentography and public health administration.

Heart Affections—Their Recognition and Treatment. By S. CALVIN SMITH, M.S., M.D., Instructor in Medicine, University of Pennsylvania Graduate School of Medicine, etc., etc. Illustrated. Military references with the permission of the Surgeon-General. Philadelphia: The F. A. Davis Co., publishers. 1920. Price, \$5.50 net.

We have noted two good points, among the many, in this little book. (1) The author says wisely: Do not treat hypertension by administering circulatory sedatives, as this may be meddling with nature's safety-valve. Employ rational treatment, such as rest in bed; freedom from anxiety, depressing emotions and excitement; free catharsis by the use of saline purges in small doses frequently repeated; elimination by kidneys and skin, these will reduce hypertension far more safely than will the employment of circulatory sedatives. Diet should be selected and limited in quantity. High percentaged

protein diet—meat, eggs, fish, fowl, cheese, peas and beans should be interdicted. In emergency venesection may be used. (2) Premature contractions are frequently called extra-systoles and dropped beats . . . such a condition is likely to arise in persons whose duties are exacting . . . the premature contractions seem to be associated with relaxed tonicity of heart muscle. Instances occur in physicians whose duties require them to be constantly on the move and in whom, after a winter of nerve and physical strain, there may be noticed a disquieting irregularity in the heart's action. A short vacation and period of relaxation, followed by a reduction in the number of working hours and the adoption of systematic exercises after coming home, usually cause such isolated premature contractions to disappear entirely. . . The disturbance is more frequent when the patient is at rest or relaxed. Exercise, causing an increase in rate, causes the irregularity to decrease or disappear.

A book so practical would be of great interest to every general practitioner.

Collected Papers of the Mayo Clinic, Rochester, Minn. Edited by Mrs. M. H. MELISH. Vol. X. W. B. Saunders Co., Philadelphia. 1919.

The first volume of this valued series appeared in 1911. The earlier numbers were made up from a vast accumulation of papers read by members of the Mayo clinic at various medical meetings. As the work of the clinic has grown, and as the number of men needed to carry it on has increased, the contributions so made to the science and the art of medicine have become more and more important.

At the present time it must be a very difficult task for the editor to keep the yearly volume down to twelve hundred pages and to select from all that are available the papers which most truly portray what is being done in the clinic in the cornfields.

When it has been the privilege of any surgeon to visit this clinic and watch its work, and when later he studies any one of these ten goodly books, their true value will become manifest.

In the rush of watching, or trying to watch, about forty operations per day, he can take little note of the sixty-five or seventy per cent. of patients referred to the clinic for operation and never allowed to reach the operating table. In the printed record every branch of forward looking surgery is represented at its best, and one gets a definite idea of the thorough manner in which the investigation of diseased conditions is carried on from day to day.

In past years we have become accustomed to the brilliant work of Will Mayo, the master organizer, of Charles Mayo, the artist in surgery, of Judd and Plummer and Wilson and McCarthy and others of the staff.

Now a new generation of men claim our attention. They are doing work that can hold its own in any company and may be said to reflect the great and growing influence of the American College of Surgeons.

W. B. Saunders Co., the publishers, have kept to the high standard they did so much to establish, and their part in bringing out the book before us is far above criticism.

The Development of the Human Body. A Manual of Human Embryology. By J. PLAYFAIR McMURRICH, A.M., Ph.D., LL.D., Professor of Anatomy in the University of Toronto. Sixth edition, revised and enlarged, with two hundred and ninety illustrations, several of which are printed in colors. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street.

This book should be of more than passing interest to students and graduates of our provincial university. The author has concisely incorporated in it the results of the all-important recent contributions upon the topics discussed. Several chapters have been recast and the subject matter thoroughly revised. Part I is devoted to a study extending from the fertilization of the ovum to the development of the external form of the embryo with the yolk and belly-stalks and fetal membranes. Part II deals with the development of the integumentary, connective

skeletal, muscular, circulatory, digestive tracts and glands, of the pericardium, pleuro-peritoneum and diaphragm; then of the organs of respiration, the urino-genital and suprarenal organs; then of the nervous system and special sense organs. The final chapter deals with post-natal development. This book, we hope, will have a wide distribution.

Massage and Exercises Combined. A permanent physical culture course for men, women and children. Health-giving, vitalizing, prophylactic, beautifying. A new system of the characteristic essentials of gymnastic and Indian Yogis concentration exercises combined with scientific massage movements. With 86 illustrations and deep breathing exercises. By ALBRECHT JENSEN, formerly in charge of medical massage clinics at Polyclinic Hospital and other hospitals, New York. 1920. New York: Published by the author, Box 73, G.P.O.

The author of this book is very well recommended by such well-known authorities as Dr. William Sharpe, Edward Leland Kellogg, and William Alvin Kellogg, all of New York.

The endeavor that the writer makes is to place before the public a scientific method of massage, combined with exercises, that they may learn how to preserve their own health. From personal experience and experiment, the author has convinced himself that massage and exercises, properly combined and carried out in a definite way, result most satisfactorily. The book is very well got up, with elaborate plates, full explanations and detailed descriptions of massage and exercises. Every exercise is analyzed as to its effect in this combined treatment. It is not too scientific and is written in such a way that it can be understood by any one who is interested in this method of conserving their own health. Beyond this, the whole question of proper breathing is taken up, and some very good suggestions made. Altogether this is a book that not only medical men and nurses should have, but one that they can recommend with safety to their patients.

Laboratory Manual of the Technic of Basal Metabolic Rate Determination. By WALTER M. BOOTHBY, M.D., and IRENE SANDIFORD, Ph.D., Section on Clinical Metabolism, The Mayo Clinic, Rochester, Minn., and the Mayo Foundation, University of Minnesota. Philadelphia and London: W. B. Saunders Company. Canadian agents: The J. F. Hartz Co., Limited, Toronto. 1920. Price, \$5.00 net.

This manual will render the valuable diagnostic method of calorimetry available to any well-equipped and scientifically conducted clinical laboratory. Following a brief outline of the history of the study of basal metabolism, a detail of the technic with description of the apparatus needed is given. A section is devoted to the method of calculating the metabolic rate and to a bibliography and appendix.

French-English Medical Dictionary. By ALFRED GORDON, A.M., M.D. (Paris). Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Price, \$3.50 net.

There is little doubt that a great many more physicians would read French medical literature were they not so handicapped through a lack of knowledge of the French language. Such a dictionary as that of Dr. Alfred Gordon will materially assist this situation and will be found immensely useful.

A Pocket Book of Ophthalmology. By ARTHUR JAMES BALANTYNE, M.D., F.R.C.P.S. (Glasgow). Lecturer on Ophthalmology, University of Glasgow; Surgeon, Glasgow Eye Infirmary, etc. Edinburgh: E. & S. Livingstone, 17 Teviot Place. 1920. Price, 5s. 6d. net.

This little book is interleaved with blank pages for insertion of notes and diagrams taken at lectures—an unique idea. There is also a fine, full index. A useful book for students and general practitioners.

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Editorial

TEACHING MEDICINE

MEDICAL teaching is constantly improving, but there is still room for further improvement. Following the survey of medical schools by the Carnegie Foundation and by the American Medical Association medical colleges were vastly improved as to equipment. Many poor schools were obliged to go out of business. With the survey of hospitals now in progress the teaching of medicine will be greatly improved. Poor clinicians and operators will be dropped, better internes will be employed and better records kept. All this helps greatly. Teachers of public school and of high school children require training in teaching methods in Normal and similar schools. Some such training should be given to young medical men who essay to teach medicine. Fortunately, a fair number of professors

and lecturers have had the advantage of such a training in their pre-medical days. It would pay some of our younger men who have had no such experience to visit such a clinic as that of Thomas Macrae, of the Jefferson Medical College Hospital, Philadelphia, and learn how the trick is done. If they have any gift for teaching—and they should have—the method of Macrae (to mention one of the best) is well worth studying and copying.

TEAM WORK

THE association of a number of men, more or less specially trained in various departments of medicine and surgery, with or without a common exchequer, is slowly but surely coming into vogue. Such an association of men makes for medical progress. The conjoint study of a more or less difficult case tends to careful history-taking and recording, which means two-thirds of the making of a diagnosis, possibly more.

Under the old way, these patients with obscure diseases drifted from doctor to doctor, and failing to receive relief fall into the hands of osteopaths, chiropractors and Christian scientists, or those of other charlatans; and the last state of that man is worse than the first.

We should like to see in all our smaller towns or counties groups of practitioners formed for the study of the obscure cases. They would need a

laboratory and an X-ray outfit. A reference of difficult cases to the joint group would, in most cases, clear up the diagnosis, and then rational treatment could be instituted. In the towns possessing hospitals, the hospital, of course, might be the centre of investigation. In towns where there is no hospital a small house might be obtained and equipped with a laboratory and an X-ray plant. These might be under the care of a young practitioner who is familiar with laboratory and roentgenology to whom the whole or the major portion of the fees might go for the work done. If the place lacked one or more of the men trained in special lines, such as eye, ear, nose and throat, one from a near-by city might be called in.

Such a combination of medical men would make for harmony and good fellowship, too often lacking in some of our country towns and villages.

THE OUNCE OF PREVENTION

OUR profession confesses to a weakness—or is it a strength—for indulging in self-denial. While endeavoring with conscientiousness and faithfulness to cure disease and alleviate suffering, we are in the van in the effort to prevent disease and thus, figuratively, to take the bread and butter out of our own and our families' mouths. For when our ideal is reached the prevention of the rank and file of diseases which keep most of us employed—the

exanthems, tuberculosis, colds, the infections, venereal diseases—there will not be much left except for the obstetrician, the surgeon (for accidents) and the geriatrist.

Patients with minor ailments and the slighter symptoms must seek medical help sooner.

The profession now is becoming alive to the fact that in many instances patients have come to them for relief too late. This applies particularly to the cases of degenerative diseases of mid-life.

The shrewd and far-seeing Sir James Mackenzie has long been preaching the necessity of studying disease in its earlier stages; and lamenting that patients with these incipient affections were too often left to the investigation of immature practitioners in the out-patient departments of our hospitals.

What struck the army doctors with much force was the number of rejected recruits for disability. The public needs to be educated. This is being done, in part, in the large cities and large towns by school inspection, baby welfare clinics, and the like. But there is the pre-school age and the post-school age. The long and short of the matter is that the health of the whole citizen body should be supervised—just as our army of warriors was. A medical inspection of our workers is as important as a medical inspection of fighters.

Canadian Journal of Medicine and Surgery

Toronto

Canada

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Address all communications to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Reprints, including halftones, etc., supplied authors at net cost.

Original Contribution

VESICAL CALCULI*

WARNER JONES, F.R.C.S. Eng., Toronto General Hospital.

THE early history of major surgery is in reality the history of bladder surgery.

Perineal lithotomy was performed by the Hindus 1000 years before the birth of Christ. It is in the Suerutas manuscript written about 600 B.C. that the details of the operation are given. It is interesting to note that it is the same operation which is now used by the Hindus in their many operations for stone.

In the writings of Hippocrates, 460 B.C., we find an accurate description of the formation of stone, also a description of lithotomy and nephrotomy, and this at a time when practically no other operations on abdominal viscera were attempted.

By the Hippocratic oath the practitioners of medicine were required to promise never to perform lithotomy, which operation was left to those who made a special practice of it, the so-called lithotomists who were not graduates in medicine.

Celsus at the beginning of the Christian era writes that operations for calculus retention of urine and urinary fistulae were well developed.

During the middle ages there was a long period during which the monks had control of medical science, and as they scorned surgery of any kind it was left to the lithotomists to keep up an interest in surgery. It was during this period that the people of Narcia developed great skill as lithotomists. They were invited to many places in Europe and some were retained as municipal employees because of their skill in operating. An interesting point in this connection mentioned by Gibbon was

* Read before The Academy of Medicine, Toronto.

that, under the Burgundian code and amongst the Visigoths about 540 A.D., any person performing an operation should, in case the operation proved fatal, be turned over to the relatives of the deceased to wreak their vengeance on him. If that law were in force to-day, applications for surgical appointments would not be so numerous. It was not until about 1460 A.D. that Colot recognized that it was a disgrace to the medical profession that such an important operation should be performed by wandering laymen.

Colot went to Italy and learned to do lithotomy. On his return to France he performed a number of operations on the cadaver, reported these to the medical faculty and to the King, and applied for permission to perform this operation on a criminal who had been condemned to death. Permission was granted, and in the presence of the King and many other distinguished persons he performed this operation on the condemned criminal in a churchyard. The patient made an excellent recovery. Because of this success Colot was honored by the King. He was appointed King's lithotomist, and became the father of a family of lithotomists. Although they were medical practitioners, they kept the details of the operation secret, and it was not until 1727, more than a hundred years later, that Francois Colot, the last of the family, gave the details to the medical profession. Following this the general surgeons found it difficult to perform lithotomy successfully, and the lithotomists again flourished.

Frere Jacques, a monk, was the chief among the lithotomists and was the first to perform lateral lithotomy. Later Cheselden, an English surgeon, perfected the lateral operation of Frere Jacques. Ambrose Pare, a blacksmith, learned lithotomy from one of the Colots and was exceptionally quick in performing the operation. Cheselden and James Douglas were the best known of the early surgeons in Great Britain, and owed their reputation to their skill in operating for bladder stone. Cheselden could do a perineal lithotomy in less than a minute. John Hunter was a pupil of Cheselden. In 1818 Civial invented the lithotrite and was the first to perform litholapaxy. The modern operation of litholapaxy, which consists in crushing a

stone and removing the fragments at one sitting, was introduced by Bigelow of Boston in 1878, and became firmly established as the operation of choice for vesicle calculus through the work of Freyer, Keegan and other officers of the Indian medical service. Previous to this date, the operation consisted in crushing the stone and leaving the fragments to be swept out by the urine.

About 1880 suprapubic lithotomy became popular with the general surgeons, and quite recently Colonel Carless told us that the first surgical operation he saw was a suprapubic lithotomy performed by Lord Lister, in which the rectum was distended with a rubber bag inflated with air and the bladder distended with fluid.

Suprapubic lithotomy is still the most popular operation with the general surgeons for the removal of bladder stone. In my student days the operation of lateral lithotomy was still being done, and I remember Mr. Cameron stating that he had performed lateral lithotomy 100 times without a fatality.

Etiology.—A urinary calculus is a conglomeration of crystals held together by a cement substance.

The crystals which form calculi are the crystalline form of substances normally found in solution in the urine. The urine is something more than a watery solution of certain salts, for it has the power of holding a greater proportion of some salts in solution than has distilled water. Thus uric acid is soluble to a greater extent in urine than in distilled water. This property is due to the presence of certain colloid bodies such as mucin and urochrome.

Precipitation in crystalline form of certain salts occurs as a result of their presence in excessive quantity or of changes in reaction or from the action of bacteria. The second essential factor in the formation of stone is the presence of a colloid cement substance. Colloid bodies are present in normal urine in the form of mucin and urochrome. But these colloid bodies are not sufficient to produce a stone. Schade has pointed out that the colloids found in urine vary in nature. They may be reversible, i.e., after once having passed out of solution they may under changed condition of reaction, etc., be again taken

into solution. Or they may be irreversible, i.e., when once precipitated they remain insoluble. For the formation of a stone an irreversible colloid is necessary. Irreversible colloids do not occur in normal urine, but are present in pathological conditions. Fibrin formed from fibrinogen is the characteristic representative of the group of irreversible colloids. The ultimate cause which leads to the presence of fibrin or other colloids in the urine when there has been no injury is at present doubtful. It may possibly be due to the presence of bacteria or to defective metabolism. Doubtless biochemistry will eventually solve the problem and may possibly give advice that will go far toward the prevention of the recurrence of stone.

Heredity plays a role in the production of calculus. Leroy d'Etoilles gives a record of eight members of one family, all of whom suffered from renal stone.

Bladder stone is less frequent in children than in adults and much more frequent in men, especially old men, than in women. In children stone is more frequent amongst the poor. Bokay found that out of 1,621 cases of urinary calculus in children 1,150 were bladder stones.

Calculi are primary when they are formed in an aseptic urine and secondary when they result from changes in the urine caused by bacteria. The nucleus of a bladder stone is not uncommonly a small stone which has descended from the kidney, or the stone may form around a blood clot or a foreign body.

The two important predisposing factors in the formation of secondary calculi are bacterial action and stagnation of urine. Vesical calculi are composed of uric acid phosphates, oxalate of lime, and according to Walker, in that order of frequency, and rarely of cystin xanthin, indigo, or calcium-carbonate.

Vesical calculi may be either movable or fixed. A fixed stone is found in a sacculus or projecting into the bladder from the lower end of the ureter or projecting from the prostatic urethra, or it may be at the apex of the bladder at the lower end of a patent urachus.

Cystitis may precede the formation of the stone or it will result from its presence. If there is no infection the cystitis

may be confined to the bladder base; if infection be present the cystitis will usually be widespread.

Symptoms.—League states that calculi which form in infancy may remain quiescent for ten or twenty years. Fixed calculi give rise to no symptoms unless cystitis be present. Very large calculi are frequently quiescent.

Frequency is the most common and the earliest symptom; it commences gradually and is progressive, soon urgency develops and there is a feeling that the bladder has not been emptied. The symptoms are aggravated by movement and are much more pronounced in the daytime. In the recumbent position the stone rolls away from the sensitive neck of the bladder and the desire to pass water is no longer felt.

Pain is a prominent symptom, and is usually the one for which the patient seeks advice. It is felt at the neck of the bladder and at the end of the penis. Sometimes there is interruption of the stream due to the stone rolling over the outlet of the bladder or to the stone becoming engaged in the orifice. Retention of urine may occur owing to impaction, and in children incontinence may occur, but more frequently there is screaming and retention. I had one patient with a large bladder stone who told me that for over two years he could not pass water when on his feet, and could succeed in emptying the bladder only when lying down, and then he would require to raise the buttocks so that they would be on a higher level than the shoulders.

Terminal hæmaturia is a frequent symptom.

When infection is present with marked cystitis all the symptoms are aggravated and there is night frequency as well.

Diagnosis.—A previous history of renal colic, together with the classical symptoms of bladder stone, make the diagnosis of bladder stone very probable. Stone in the lower end of the ureter may give all the symptoms of bladder stone except that the pain is not influenced by movement.

Calculus associated with enlarged prostate may not give rise to distinctive symptoms.

Sounding the Bladder.—Before sounding the bladder for stone one should make sure that the urine does not contain

tubercle bacilli. If tuberculosis is present the bladder should not be sounded.

In sounding for stone the greatest care should be taken not to carry infection into the bladder.

The X-ray is the most convenient method of diagnosing bladder stone, but will not tell whether a stone is fixed in a sacculus and requires careful interpretation so as not to mistake a stone in the lower end of the ureter for bladder stone. If there is any doubt as to the diagnosis between ureteral and bladder stone, a cystoscopic examination will clear up the diagnosis. Recently I have seen such a mistake made in the reading of an X-ray plate, and the bladder was opened and no stone found; the surgeon thought that possibly the stone was concealed in a sacculus with a small orifice; he was unable to locate it by the sense of touch. Subsequently a cystoscopic examination showed that there was no stone in the bladder, and one could see thick pus coming from the left ureter, which together with the X-ray enabled one to diagnose impacted a calculus in the lower end of the left ureter, and the stone was removed by operation immediately following the cystoscopy.

Cystoscopy may not reveal a stone lodged in a sacculus, especially if the orifice of the sacculus be small, because the cystoscope is unable to illuminate the sacculus, but it will show the orifice of the sacculus, and then, through further investigation, either by bi-manual palpation or by making a cystogram, the presence of the stone in the sacculus will be revealed. A stereoscopic plate should aid in the diagnosis, also X-ray plates taken with a change in the posture of the patient.

Operation.—When a patient has had one or more attacks of renal colic and the pain has ceased but he has not passed the stone, it is wise, especially if there is vesical irritation, to cystoscope the patient, and if a small stone remains in the bladder it may easily be removed by a Bigelow evacuator or by means of an operative cystoscope.

When bladder stone has been definitely verified it should be removed, either by litholapaxy or by suprapubic cystotomy. Before proceeding to operate a function test of the kidneys should be made, because in advanced cases of bladder stone

where a foul cystitis is present, the patient may be the subject of advanced pyelonephritis as well, so much so that he is not a fit subject for either instrumental interference for the purpose of diagnosis or for operative interference for the removal of the stone. This is especially true of stone cases associated with enlarged prostate.

Choice of Operation.—For medium-sized stones up to one and a half inches in diameter where there is no stricture to prevent the passage of a large instrument and where there is no enlargement of the prostate, I think litholapaxy is the best operation.

Where there is a foul cystitis and this associated with mild pyelonephritis, literal lithotomy is probably the safest operation.

Where there is enlarged prostate, litholapaxy should not be done.

In children suprapubic cystotomy is the safer operation and the bladder may be closed without a drain. In adults also if there is no infection, a suprapubic cystotomy may safely be closed and a wick left in the space of retzius.

In skilful hands litholapaxy is a comparatively safe operation: occasionally patients may develop pyelitis and run a stormy convalescence. Early this year I had the experience of breaking the male blade of the lithotrite while attempting to crush a large and very hard stone; in this instance the broken blade of the lithotrite did not leave the slot, so there was no difficulty in withdrawing the instrument. Suprapubic lithotomy was then done, and the stone removed with great difficulty by reason of its size.



Selected Articles



MEDICAL RECONSTRUCTION

DR. J. P. WARBASSE, under the above caption, recently contributed an article in the *Long Island Medical Journal* which ought to be widely and deeply noted by the medical profession. He lays it down as fundamental that the best interests of the people are better served when commodities are produced and distributed and labor performed as a social enterprise directly for service, than when these functions are carried on by private interests for private profit. All the property in the United States, he has learned, belongs to one-tenth, or, at most, to one-fifth of the people: 65 per cent. of the people own only 5 per cent. of the property; 2 per cent. own over 60 per cent. of the national wealth. This concentration of wealth is increasing, and a small group of financiers among this 2 per cent. virtually control the situation. Such a condition prevails in all industrial countries. Labor does not like it, and labor represents the majority of the population. Warbasse considers it unfortunate that most of the medical profession have not grasped the facts of the situation, and so are not in a position to put themselves on the side of progress, the side of right, which will ultimately prevail. To be on the losing side in the great conflict now confronting the world means disaster. The doctor prefers to regard himself as a tradesman or financier rather than a working man. His preferences are with property rather than with labor. Society compels it so. The doctor prefers to drive up in front of the abode of the rich than to the tenement of the poor, because it means more income, which spells better access to the joys of life. And that is what everyone should want. The doctor is in business because his knowledge, his skill, his reputation and his manners are his stock, which he

barter in competition with his fellows. His profession differentiates itself from that of labor in that the leaders of medicine desire that the present economic system shall continue, while the labor leaders desire that it shall not. The natural affiliations of the doctor are with those in affluence. He reads conservative publications. He casts his lot with the vested interests of property. His ethical sense is flattered by the praise of the parson who calls him a ministering angel and discourses to him of self-sacrifice. This is his manna. He resents honest and scientific discussion and the economic circumstances by which he is enmeshed, a helpless victim of a rash social system in which he plays but a small part. The rich and the cultured classes who have the good things to enjoy are the classes which least desire change. They supply the forces to prevent change. They are willing to feed the poor, entertain the weary, reform the prostitute, heal the sick, cleanse the slums—to do everything to make it easy for the poor. The function of charity is to salve over the symptoms of a bad social disease. The privileged rich will do everything but cure the disease. Their charity is like that of the man who cuts off his dog's tail to make soup; and after eating the soup gives the dog the bones. Charity gives the poor nothing that is not already theirs by higher right. Reforms and reformers placate the ills, but abstain from attacking causes which produce them. The very existence of charity and reform signifies that things are wrong.

Dr. Warbasse states that the medical profession suffers the disadvantage that its alliance with the better elements of society denies it fundamental information. How few of them read any of the labor or socialistic papers, or even such liberal periodicals as *The Nation*, *The New Republic*, *The World Tomorrow*, *The Dial*, or *The Survey*! The news and the interpretation of the news which the average doctor reads are in publications hostile to the movements which make for change in the present economic system. The daily grist of falsehoods, however, cannot retard the rising tide. Forbidding the use of the socialistic flag, denying the use of halls to speakers, police coercions, exclusion of publications from mails, are only ex-

pressions of defeat, according to Warbasse. The use of force to combat ideas is an evidence of the bankruptcy of the present political system. The privilege of voting at the polls, if it were accorded to everybody, cannot constitute democracy so long as the machinery and tools of production, the means of life and livelihood are owned by other people. When labor gets \$10 a day and a six-hour day it will ask for \$20 a day and a three-hour day. And it will keep on making demands so long as things are produced for profit. So long as there are people who do not work, but live on the profits made out of the labor of others, labor will never be satisfied. The existence of interest, rent, profits of exchange, and dividends means the maintenance in society of two classes—those who live by service and those who live by income from property. Labor will either be reduced to slavery and kept in subjection by force; or it will have all the wealth it produces. War will continue until labor wins.

Warbasse goes on to say that there are two parties in all industry. In medicine these are doctors and patients. Both should organize for their own protection. When all capable people perform useful service and when all labor is united in one big union, the producers and the consumers will be found to be the same, and the economic regeneration of society will be attained. Until that time comes the man who consumes more than he produces must be regarded as a parasite, and the man who produces more than he consumes must be regarded as being exploited. The principles of Socialism are adopted by its enemies just before defeat overtakes them. So we see capitalistic governments plunging pell-mell into public ownership of public utilities, and placing the administration of such socialized enterprises in the hands of the very men who have always said that such a course was wrong and impracticable. But there is no help for them; either they must do it or the Socialists will. The public must be placated, and the politicians must keep ahead of the howling pack of radicals or they will be destroyed. And so we have the modern political hysteria, which gives the hybrid thing called public ownership, which is best known as "state capitalism."

The medical profession is caught in this current, and is helpless because neither it nor the public are organized to meet it. Before the war 20 per cent. of the doctors of England were in the employ of the Government. Now about 70 per cent. are; and the new Insurance Bill will increase that. Similar bills are in course of preparation in various United States' legislatures. Such legislation begins in a mild way, but the end is state control of the doctors, who will receive a fixed stipend for taking care of a panel of so many families. The doctors in England fought against this Act, but they had no organization capable of meeting the situation. Though they resisted, they were practically commandeered and confiscated by the Government. So it will be here. It goes before legislative bodies with its protests. Its programme consists of obstruction and negation; it has no constructive alternative to offer, and so it fails utterly. It fails because it lacks fundamental knowledge of economics; and because it has not used such knowledge to put itself in harmony with the world-currents of progress. It has been the sycophant to property and failed to realize that its interests are with the workers. The programme which ultimately will prevail is that which emanates from the radical-labor movement. Labor holds the key, stands at the source of life and occupies the strategic position. It can win by folding its arms.

Warbasse says in the future of medical practice there are five possible economic phases: (1) Medicine under individualistic economic competition—which is now approaching the end of its dominance; (2) the administration of health agencies by the political state (as in the war)—bad because administered by the capitalistic political state, which is poorly adapted to the function; (3) guild socialism—meaning that the state shall own the hospitals, but doctors, nurses, and other workers shall organize and run them. The state would exact or take rental for the use of its property, the organized physicians would exact wages for their services; (4) health administration under co-operation. The great sickness societies of Russia, Germany, Austria, and Great Britain are such co-operative institutions, and are promoting health agencies with noteworthy success. In

Belgium such societies supply pure milk for babies, send children on vacations, provide a six-weeks' rest for parturient women, secure sick benefits and unemployment allowances, also pensions for workers, etc. In Europe these movements embrace one-third of the population; (5) the syndicalist principle in the organization of health agencies as exemplified in the Mayo clinic. Here is a group of surgeons and physicians, experts in most of the departments of medicine, who control a great organization for producing medical and surgical treatment. The income from services accrues to the members of the group who distribute it, by their vote, as they please. Among the members of this syndicate economic competition is eliminated. Only scientific and technical excellence are countenanced. So prosperous is this organization that it is able to place the consideration of service above that of pay. Any person, irrespective of rank or station, no matter how poor, may apply there for treatment and receive the same consideration. The physicians through whose hands the patients pass are spared having the knowledge of the patient's financial status. The surgeon has only one consideration—to do his best for each patient. No fee is charged, and no discussion of finances is entered into until the patient is ready to leave. Then he is sent to the office and pays according to his income and ability. It may be much, it may be nothing. He has received his treatment; the compensation is in his control. This plan, from a financial standpoint, is enormously successful; and from a medical standpoint is unsurpassed in its results. This institution represents co-operation at the point of production, at the place where the things are done, and by the workers who do them. By giving first consideration to perfecting results and doing supremely good work for everybody, the financial rewards have been very great. The workers have been well paid, but funds have been set aside for insurance, pensions, scholarships, research, building, and other reserve purposes.

Here is an object lesson in organization capable of application to every branch of medical practice and susceptible of adoption by the whole medical profession. It would be possible for the American Medical Association to develop the medical pro-

fession in this country as a great organized group of experts, guaranteeing to each an adequate income, demanding high standards of efficiency, seeing to it that the man is adapted to his specialty, publishing its own literature, subsidizing its own authors, manufacturing its own instruments and drugs, and conducting its own schools and hospitals. But it cannot be developed unless bureaucratic methods are utterly eliminated. The Mayo clinic is not purely syndicalist until it embraces *all* of the workers in the institution—of whatever sort. Nor can the American Medical Association or its state and county societies become effective instruments to promote the welfare of their members until they are made democratic—amenable to the will of the whole membership—one vote for each member; elections by preferential ballot; the recall, the initiative, the referendum.

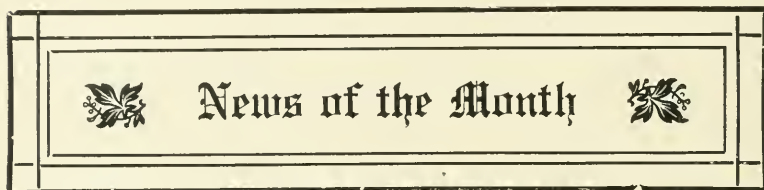
The new call for reorganization of the medical profession must come from young men, whose minds are still open, and who have not yet been spoiled by officialdom. Opportunities await the medical profession, but it must recognize its brotherhood with labour and organize on a democratic basis. When it appears before legislative bodies, it will have the prestige of mass movement, and will get what it wants. As now existing, a medical delegation to a legislature has the appearance of a clique. Any large group of people can make their own laws, and if they have solidarity they can enforce them—an economic axiom. The American Medical Federation should organize new groups and not make use of the old societies, except in communities where there is a progressive spirit, or where the society is composed largely of young men. The organization should control medical practice and health agencies, but should not conflict with the scientific work of existing societies. It should aid them. Specialists in all departments should have their guilds—doctors, dentists, nurses, sanitarians, medical chemists, etc. Being fundamentally economic in character, the profession need not stand on its dignity, as at present, and pose as a semi-philanthropic enterprise. It should frankly and honestly lay down the premises that the doctor is working for his living, and as a worker is entitled to receive pay commensurate with his work.

surate with the value of his services. It should neither expect to receive charity nor to give charity. Justice is all it should demand—full justice both for itself and for the patient. Every human being is entitled to proper medical care; the test should not be the amount of money the patient has, but the amount of need. If the municipality does not provide adequate medical institutions for the poor, with doctors fully paid to administer them, the doctors should take care of the poor and send the bill to the municipality. They can collect it if they are organized to do so. In parts of France this is now being done. The organized profession should systematically take up with the political authorities this matter of the care of the poor and adjust it on an equitable basis. The doctor who renders necessary medical service to the sick should always receive pay for it, and his organization should maintain the machinery to secure it for him. The organization should concern itself as little as possible with legislative matters; it should solve its problems itself so far as possible in the economic field. The federation should maintain a control of the qualifications of its members, jealously guarding their interests, and maintaining high standards of efficiency. Research should be provided for. Certain men should be subsidized to carry on experiments. Co-ordination in diagnosis and treatment should take the place of competitive individualism. Centres should be established for team work, where all the information needed regarding a patient can be collated—urinalysis, X-ray, blood examination, bacteriological studies, ureteral catheterization, etc., etc. Communities should be divided into sanitary districts, each with a sanitary expert answerable for the public health. This centre should have a laboratory and a hospital.

Disease is of social importance; therefore, health is. If left as at present to private competitive business, the patient does not come to the doctor until he is sick. This means that most disease is undiscovered and untreated. Any examination of school children, factory workers, military recruits shows this to an astonishing degree. Health service should be organized not only to seek out disease, but to prevent disease-breeding conditions. This can be carried out best as a social enterprise.

either by the socialized state or the co-operative society. The best rewards should be for preventing sickness.

Any of the above-suggested plans may be used to carry forward these reforms, except number 1—the present expiring system of individualistic competition.



LAMBTON COUNTY PHYSICIANS

LAMBTON County Medical Association annual meeting was attended on February 10th by Drs. Bell, Bradley, Kenny and McDonald, of Sarnia; Drs. Reid and Houghton, of Wyoming, and Drs. Smith and Hamilton, of Petrolea; Sayer, of Watford, and Brown, of Camlachie. Dr. Sawyer, of Watford, was re-elected President; Dr. Hamilton, Vice-President, and Dr. Smith, of Petrolea, Secretary-Treasurer. An interesting paper was read by Dr. Routley, of Toronto, showing the necessity of doctors using their best ability in educating the public against irregular charlatans of the present day.

THE New York Post-Graduate Medical School and Hospital announces that there will be available this year six scholarships under the terms of the Oliver-Rea Endowment. The purpose of the endowment is to award scholarships to practising physicians of the United States to defray in full the expenses of tuition at the New York Post-Graduate Medical School. Applications may be sent to the President of the New York Post-Graduate Medical School and Hospital, 20th Street and Second Avenue, New York City.



The Physician's Library

Hygiene of Communicable Diseases. A handbook for Sanitarians, Medical Officers of the Army and Navy, and General Practitioners. By FRANCIS M. MUNSON, M.D. Illustrated. Price, \$5.50. New York: Paul B. Hoeber, 69 East 59th Street.

This new and up-to-date manual is, as it purports to be, a handbook, most compendious and very complete in its range. Part I, Epidemiology, Prophylaxis, and Sanitation, contains twenty chapters, some of them discursive, but full of well-arranged information, exhaustively but very briefly set forth, from classification of the causes of communicable diseases to a modern exposition of sanitary measures and administration.

Part II contains seven chapters on the communicable diseases.

While not purporting to be more than a manual for the civilian sanitarian, the book, with its wealth of reference to tropical parasites and infections, is tinctured with naval and military colors, and is a welcome evidence of the better day coming, when the U.S.A. will take up with Britain and France the "White Man's Burden" of the dependent races in the tropics.

Physiological Chemistry. A text book and manual for students. By ALBERT P. MATHEWS, Ph.D., Professor of Biochemistry, The University of Cincinnati. Third edition, illustrated. New York: William Wood & Co. 1920. Price, \$6.00.

The third edition of this well-known work, coming so soon after a series of reprinted editions, is evidence of its popularity with teachers and students of physiological chemistry. The

present edition maintains substantially the same order of treatment as the previous edition. Revision of the matter in several sections has been made and there are some substantial additions in the practical methods. In the new section on hydrogenion concentration determination, the principles of the method are presented in a conventional way. While it is too soon to criticize the pedagogy of this, one would guess that there will be evolved a method of presenting this subject which will give the reader a clear and balanced view of the experimental details and their background without shifting the burden of the explanation of these to the physicist and the mathematician.

We think the book will continue to be valuable in the field for which it is intended.

The Microbiology and Microanalysis of Foods. By ALBERT SCHNEIDER, M.D., Ph.D. (Columbia University). With 131 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Price, \$3.50 net.

The direct bacterial count is the most valuable analytical factor now in use. This work will serve as a text and laboratory guide for students in dietetics, home economics, food testing, food decomposition, food analysis, etc.; also to classes in colleges of pharmacy and technical schools. The book is full of findings based on the examinations of foods and drinks of all sorts. Methods of practical study are detailed, so that any intelligent student with a microscope, stains and a few apparatus can enjoy an entrancing bit of study. In these days when so much stress is laid on food—its quality and preparation—a knowledge of various contaminations is quite necessary.

Extra Pharmacopœia of Martindale and Westcott. Revised. 17th edition. In two volumes. London: K. H. Lewis & Co., Ltd. 1920. Price, 27 shillings.

The authors contend that though the British commercial door must (apparently) always be open, we must claim and exercise the right to choose what and who shall pass through it

and to consider whether it is not better to teach our own people the art of manufacture than to devote our national resources to buying and providing the means to buy.

The authors further maintain that bacteriology should be all-important to the young pharmacist. They hold also that the experience gained by many medical men while working close up to the lines under pressure, will be worth more to them and to their students than the slavish copying of German professors' dogma in times gone by.

This first volume is replete with fresh data for the practitioner and pharmacist, in whose libraries it should have a valued place.

The Course of Operative Surgery. A handbook for practitioners and students. By PROF. DR. VICTOR SCHMIEDEN, lately assistant in the Royal Surgical Clinic in the University of Berlin, Professor of Surgery in the University of Halle, and ARTHUR TURNBULL, M.B., Ch.B. (Glas.), lately Demonstrator of Anatomy in the University of Glasgow. With a foreword by Prof. Dr. A. Bier. Second enlarged English edition. Toronto: The J. F. Hartz Co., Limited. 1920. Price, \$6.50.

This book is a simple work which appears to be designed for the student who is entering upon a course of operative surgery on the cadaver.

The descriptions of operations are for the period prior to 1912, and take for their background the normal anatomical relations.

It is, therefore, not a book which would appeal to the surgeon who is exercising his skill on the living patient and who is looking for enlightenment on the finer points which go to make a successful operation.

To the surgeon of to-day, who keeps his anatomy ever in mind, but who depends so much on his knowledge of surgical pathology, the work is little better than an elaboration on human dissection.

In a course of operative surgery the student should not

learn how to ligate an artery, excise a joint, or amputate a limb before learning how to deal with all those conditions which make necessary a ligation, an excision, or an amputation.

The book is well printed on white glazed paper and contains numerous drawings and photographs, but has nothing to commend it to the practising surgeon and very little to the student.

General Pathology. By DR. ERNST ZIEGLER, Professor of Pathological Anatomy and of General Pathology in the University of Freiburg, in Breisgau. From the eleventh revised German edition (Gustav Fischer, Jena, 1905). Revised by Douglas Symmers, M.D., Director of Laboratories, Bellevue and Allied Hospitals, formerly Professor of Pathology in the University and Bellevue Hospital Medical College. With 604 illustrations in black and colors. New York: William Wood & Company. 1921. Price, \$7.00.

The presentation of this (fifth American) edition has enabled the author by a thorough review of current work to cover in concise form the facts learned from recent pathological investigations. While in general arrangement there is no essential change from previous editions, the subject matter has been completely revised. Many chapters have been largely re-written and expanded so as to include more recent developments and lay more stress upon the relationship of pathology to the allied phases of biological science.

Some of the sections, namely shock and influenza, might have received greater attention in view of their recent world-wide interest to both pathologist and clinician. However, most of the accepted views have been expressed. The chapter dealing with neoplasms has been largely re-written, and while no marked advance in our knowledge of the etiology of these conditions has been attained, many theories are discussed and much new and useful information has been added.

This well known work is remarkable for the wealth of its material, and this, in conjunction with a very extensive bibliography, makes it equally valuable to busy practitioner and the student of pathology.

It is not necessary for us to say much of a work so well known as this, and in which the subject matter is so clearly and concisely expressed. This volume has all the merits of its predecessors and is well up-to-date.

Canadian Medical Directory (Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, Yukon). Containing the law of the reciprocity of license between the United Kingdom and the Britannie Dominions; the laws and regulations of the Medical Council of Canada with the list of the licentiates; the announcements of the faculties of Medicine of Canada, with the staffs of professors; the Medical Societies, Hospitals, Homes, Sanatoria, etc., of each province, etc., etc. Fourth edition, 1921. Canadian Medical Directory, Montreal. Copyright, Canada, 1921, by R. Villecourt, M.D., publisher.

The fourth edition of *The Canadian Medical Directory* is a distinct improvement on any of its predecessors. It contains a great deal of information as outlined above, and should find a ready sale to physicians, hospitals and boards of health. We congratulate the editor on the result of his year's labors.

A *Text-Book of the Practice of Medicine*. By JAMES M. ANDERS, M.D., Ph.D., LL.D., Professor of Medicine, Graduate School of Medicine, University of Pennsylvania. Fourteenth edition, thoroughly revised with the assistance of John H. Musser, Jr., M.D., Associate in Medicine, University of Pennsylvania. Illustrated. Philadelphia and London: The W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co., Limited, Toronto. 1920. Price, \$11.00 net.

It is quite seldom that any work on medicine survives fourteen editions. Such is, however, the case with Anders'

Practice of Medicine, the fourteenth edition of which has recently come to hand. We heartily congratulate Dr. James M. Anders and his associate, Dr. John H. Musser, on this volume. It is creditable in every way, having been very fully revised. The author has wisely paid attention to the practice as well as to the theory of medicine, something that medical writers do not do as much as they ought. The clinical aspects of Heart Block have been given considerable space, and the chapter on Influenza re-written, owing to its prevalence of recent years.

Obituary

DEATH OF DR. JOHN S. KING

DR. JOHN S. KING, one of Toronto's senior practitioners, died at his home, 37 Fuller Avenue, on February 14th, at the age of seventy-eight. He was born in Georgetown in 1843, of originally United Empire Loyalist stock. He finished his education at the University of Toronto, from whence he graduated in 1886. In 1889 his Alma Mater granted him the honorary degree of M.D. For thirty-five years he was physician to the Mercer Reformatory.

DR. A. B. ATHERTON DIES

Dr. A. B. Atherton, for many years a practising physician and surgeon in Fredericton, died on March 8th, in California. In the latter eighties he removed to Toronto, before returning to Fredericton.

VICTOR X-RAY BEDSIDE UNIT

THE Victor Bedside Unit offers a range of service that makes it practically indispensable to the hospital as an adjunct to the regular Roentgen laboratory equipment. The apparatus is designed to energize the 3-in. and 5-inch radiator type Coolidge tubes to their respective maximum capacities. This means sufficient penetration to radiograph or fluoroscope any part of the body. In contrast with X-ray machines of greater capacity and therefore heavier and of the stationary type, the Victor Bedside Unit is semi-portable in that it can be quickly and easily moved from room to room and floor to floor in the building. This makes it invaluable as a hospital outfit, especially in cases where the patient cannot be conveniently moved to the X-ray laboratory. In the design of this machine the engineers have given special care that the operator may obtain the maximum efficiency from his tube at all times in spite of varying line conditions. The transformer proper is of the oil immersed closed-core type, and of the same high quality design and construction as in all other X-ray transformers bearing the Victor trade mark. The Tube Stand of the Victor Bedside Unit stands out in strong contrast with that of any other similar outfit offered to-day. It is specially designed for use with the radiator type Coolidge tube, and the same skill and care given to its construction as in any other Victor tube stand.

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The Canadian agents for The Victor X-Ray Corporation are The J. F. Hartz Co., Hayter Street, Toronto, from whom full particulars can be obtained.

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Editorial

THE MEDICAL HEALTH OFFICER

COLONEL FREMANTLE, in the *Medical Officer*, says that those who seek Public Health as a career must put their whole souls into the service—as well as all their fortunes, present or future—if they are to make it a success. The second qualification is to be leaders of men. A quick eye is required to the main factors in any situation and to their relative importance. The critical habit of observation and diagnosis can be extended to one's fellows and the public. Sense of proportion, tact, humor, and steady dogged drive will make good. Health officers must know the whole of life at every age, in each sex, in every class and calling. They should themselves live an all-round life, physical, mental and spiritual, making efforts to understand every phase of mind and con-

dition—particularly of those with whom they have least in common. Their life must be full, but peaceful, orderly and contented. Its very fulness and human sympathy with the gay as well as the dull parts of life will make it rich. Besides, they need a knowledge of the world and a sympathy with those whose views are different from their own.

The scientific man must try to understand the materialist; the visionary the materialist; the keen man the indifferent man on the street; the philosopher, the man of action. All must study the working of the female mind; both must try to enter into the children's world; Protestants, the Catholics; Englishmen, the Frenchmen, Germans and Russians; the well-to-do, the poor; the cultured, that of the toiling masses.

General knowledge and culture were of special importance. A love of "the humanities," history, literature, politics, biography, art, religion, sport, country life, is of no less importance than technical training. The general circumstances, habits and ways of living of the population must be learned. Sociological study is of great importance. A little practical experience with boy scouts, working-class clubs, settlements and kindred agencies, and direct contact with all parts of village life in the country, was invaluable. Appointments giving experience in all departments of hospital and laboratory work, work in schools, sanatoria, asylums, clinics for childish ailments, for maternity and infant welfare, for tuberculosis and venereal disease—all were of great

value. Surgery was a waste of time, except as a training in clear thinking and decisive action. Experience of research was useful. A knowledge of physiology, bio-chemistry and of psychology was important. Medical health officers depend for their success largely on their personal qualities. Their experience should be spread widely. They should avoid the reputation of the butterfly, however, which never settles down to see any work through. Opportunities should not only be seized when they present themselves but should be hunted for.

This advice of Dr. Fremantle contains advice applicable to general practitioners as well as to health officers.

THE PATENT MEDICINES ACT

THE passage of an Amendment to the Patent Medicines Act raises the question of the appointment of a Propaganda Department in our Dominion or Provincial Medical Associations.

The American Hospital Association has such a department. It has for its primary object the prevention of medical fraud on the public. It has become a clearing house for information on the subjects with which it deals; and to it are referred inquiries from federal and state departments, health officials, editors of papers and magazines, etc.

This department makes original investigations and conducts analytical examinations, when neces-

sary, of these various nostrums. It also collects data from state and municipal boards of health and from technical and lay journals and from special commissions.

The department answers queries in regard to these so-called remedies and publishes a series of books and pamphlets, which may be secured by anyone interested, for a small sum. It prints placards and supplies material for public lectures (illustrated). The Journal of the American Medical Association devotes a portion of each number to an exposure of these frauds.

The larger Associations of Canada perhaps lack the financial means to take this matter up extensively, but they might make a beginning, using their own official journal for a certain amount of propaganda work.

Canadian Journal of Medicine and Surgery

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Canada

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

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Original Contribution

THE QUESTION OF DOSAGE IN THE PREVENTION AND TREATMENT OF DIPHTHERIA*

BY C. A. RAE, M.B., ISOLATION HOSPITAL, TORONTO.

MR. CHAIRMAN AND FELLOWS OF THE ACADEMY: In presenting this paper I can but reflect the teaching of my late chief, Dr. Marchand B. Whyte, who has for many years been one of the leading advocates of the administration of antitoxin in large doses. I wish also to acknowledge my indebtedness to Dr. C. B. Ker, of Edinburgh, whose practical text-book on infectious diseases is probably the most outstanding work of its kind ever published, and from which much of my material has been secured.

There is, I take it, no division of opinion with regard to the value of antitoxin in the treatment of diphtheria. Formerly treatment was practically useless, but since the introduction of antitoxin it has become very effective, and if patients were all seen on the first day of their illness and antitoxin injected the mortality would be only about one per cent., and large and intravenous injections of antitoxin would not require any advocating. Unfortunately such a condition of things we cannot expect to find. Many cases come comparatively late under treatment or again the true nature of the case may not at first be fully realized. In consequence, even since the discovery of antitoxin, and with its supply free and very accessible to all parts of the province, diphtheria remains a very serious and dangerous disease and was responsible for 475 deaths in Ontario in 1919, and between 650 and 700 in 1920.

*Read before Section of State Medicine, Academy of Medicine, Toronto.

An "Analysis of Diphtheria Deaths in Ontario," recently compiled by Professor Fitzgerald, brings out some points which I would like to mention:

(1) Despite a steady increase in population from 1,884,000 in 1880 to 2,800,000 in 1918, the total number of diphtheria deaths fell from 1,251 in the former year to 335 in the latter year. This in spite of the fact that there was not only an increase in the number of cases, as would be expected, but also an increase in case-incidence over that period, due no doubt to the fact that many mild cases were diagnosed bacteriologically as diphtheria which formerly would have been called tonsillitis.

(2) Over the period of seven years from 1912 to 1918 inclusive the percentage of deaths of cases treated in hospital was 6.58 per cent, and of cases treated at home 12.79 per cent.

(3) In 85 per cent. of the hundred fatal cases investigated by Prof. Fitzgerald the physician was not called until the patient had been ill for more than two days, and in over 50 per cent. of the cases more than four days elapsed before treatment was begun.

(4) The table illustrating the case fatality according to the duration of the disease when antitoxin was given shows:

	Per cent.		Per cent.
First day	1.1	Fifth day	9.2
Second day	5.6	Sixth day	9.3
Third day	6.8	Seventh day	11.4
Fourth day	7.7		

These statistics demonstrate clearly the wonderful results of antitoxin treatment and the steady increase of mortality that occurs with each day the case runs before receiving this treatment.

Everyone will agree, however, that the greatly reduced mortality of diphtheria since the introduction of antitoxin is not entirely due to its use. Many cases are now shown bacteriologically to be diphtheria that some years ago would not have been so considered, and these are the milder type of case. But if we limit our study to the mortality of laryngeal diphtheria, which is diagnosed clinically now just as years ago, we have a reliable comparison. We can make this still more

certain by referring only to laryngeal cases which required intubation. Ker states that the reduction in mortality for different hospitals the world over is about the same, namely a decrease of from 70 per cent. to about 30 per cent. Again it might be pointed out that while the spread of the disease from the tonsil to the larynx was the most dreaded complication of diphtheria in pre-antitoxin days, it is now never seen because if the larynx is free when the case is first seen and sufficient antitoxin given one can feel confident that there will be no further spread of the lesion.

Having the above facts in mind then we must consider what amount of antitoxin we shall use and how it is to be administered: our idea being to give a sufficient amount, whatever that may be in an individual case, to save the life and to prevent in as far as possible myocarditis and paralysis. To begin on there is no evidence that an overdose of antitoxin can be given, but on the contrary much evidence of underdosage and delay in administration. The question of the actual dose, however, must always remain more or less a matter of opinion, as it is impossible to gauge with absolute accuracy the amount of toxæmia from which any patient may be suffering. All we can expect to do is to give such a dose as has in our previous experience proved satisfactory in patients who have presented corresponding lesions and whose general condition has appeared similar.

There is no doubt that the general trend of those who have been studying diphtheria both from a bacteriological and clinical standpoint is toward the use of large doses. Ker of Edinburgh and Park of New York, who a few years ago were the best known advocates of small doses of serum, are now recommending injections up to 50,000 units, and it is generally recognized now that in very severe and neglected nasopharyngeal cases, often called malignant, that a small injection of serum, say 10,000 units, has little or no effect and that only from the largest doses can any results be observed.

The malignant cases usually have a complicating septic organism and the toxæmia is profound. They almost always are neglected cases in which the membrane beginning on the tonsil extended rapidly to involve the whole pharynx, the nasopharynx, the nose and sometimes also the larynx and trachea.

The patient is admitted to hospital in an extremely drowsy or semi-conscious condition with a marked pallor or often indeed a "poisoned" appearance. The cervical glands are enlarged and form a matted collar about the neck. There is a very profuse purulent or sanguineous discharge from the nose with excoriation of the nares and lip. Examination of the heart reveals a very soft first sound and often some dilatation; the pulse is rapid, soft and easily compressible. The membrane is found covering both tonsils, the uvula, the nasopharynx and often the entire soft palate. The characteristic odor is present. About the membrane is a narrow margin of acute inflammation, while the whole throat is swollen and slightly oedematous. Albuminuria is present and one or both ears may be discharging. As regards the temperature, I would just mention that it is no guide to the condition, and that if it is to be considered at all it must be with the realization that generally speaking the worse the case the lower the temperature.

What then may we reasonably expect the antitoxin to accomplish?

(1) It *will* neutralize all the toxin free in the blood stream at the time of injection.

(2) It will limit the spread of the membrane and ultimately cause its disintegration and removal.

(3) It *may* detach any toxin which has only recently entered into loose combination with the tissues.

Obviously then the amount of toxæmia from which the patient seems to be suffering, the size of the lesion on the throat or elsewhere, the day of the disease on which the case is seen and the age of the patient must come under consideration. With regard to the latter I would take exception to the idea of giving antitoxin according to weight, because, as Ker points out, it is in children that the disease is most fatal, and they require more antitoxin than adults for corresponding lesions. Otherwise on strictly scientific grounds it would appear the most reasonable system, for as Park shows it is obvious that the smaller the individual the greater after a given dose is the amount of antitoxin in each cubic centimeter of his blood.

For a *minimum* therapeutic dose I would place the amount at 20,000 units. For a *maximum* dose 200,000 units. For in-

infants under two years 5,000 to 25,000 units. For children between two and six years 10,000 to 50,000 units.

Should this dosage in a child, however, not give the anticipated good results I would have no hesitation in repeating even the maximum dose. One would not of course give 200,000 in a single dose, but it may be easily given in the first twenty-four hours. Such a quantity of serum seems no doubt to be heroic, and I quite agree that very few cases seen by the general practitioner require anything like as much serum. At the hospital the situation is different. Many of the cases are admitted in a moribund condition, and the prognosis is almost hopeless, one-third to one-half of all our deaths occurring within twenty-four hours. It is in these cases where large doses are essential if any are to be saved. For the moderately severe cases the large dosage is I believe responsible for the great reduction of myocarditis and post-diphtheritic paralysis that has taken place at the hospital since 1912, when large doses were first commenced. Where possible, however, the administration of a single large dose should be adhered to because the antitoxin is being absorbed for days. To give repeated doses is only to delay getting the required amount into the blood. Park shows that an animal receiving 15,000 units in one injection exhibits after eighteen hours more than thrice the amount of antitoxin in the blood than another which receives four doses of 5,000 each at intervals of eight hours.

As regards to the mode of injection, three methods are available namely (1) Subcutaneous, (2) Intramuscular, (3) Intravenous.

The *subcutaneous* is undoubtedly that in general use and may be said to be quite satisfactory in the mild cases and in cases which are seen on the first or second days. The skin should be cleansed at the point of injection and the syringe used carefully sterilized. The abdomen is in our experience at the hospital very much the best site for the injection. For severe and neglected cases and for laryngeal cases the *intramuscular* injection is the method of choice, especially for cases treated outside of hospital. It is a method which seems to be gaining favor every day and which we are using more and more at the hospital. In point of rapidity in absorption it comes in between the subcutaneous and the intravenous, being absorbed

three times as rapidly as the former. The intravenous method, however, has ten times as rapid absorption as the subcutaneous and is without doubt the most effective way of giving the serum. Park states that dose for dose when two units of antitoxin per c.c. of blood are obtained in six hours by the subcutaneous method, 20 units are found present if the intravenous route has been used, and although there is a steady increase of antitoxin in the blood with the first method and a steady decrease with the second there still remains after twenty-four hours a difference in favor of the intravenous of twelve units per c.c. as against six units per c.c.

The *intravenous* method, however, is difficult of use in private practice not only on account of being injected into the vein but rather because it is followed in about 65 per cent. of cases by more or less severe chill lasting from five to sixty minutes. This chill comes on usually within an hour and is often very alarming to the parents, and should the child subsequently succumb to the disease they will often place the blame on the serum. In hospital practice it is used very beneficially in severe cases and in laryngeal cases. The injection is made slowly usually into the median vein, or in small children in the external jugular. The serum is warmed to body temperature before administration, and strict asepsis adhered to. It is also important to use the diluted serum, which is put out by the Connaught Laboratory especially for intravenous use in 5,000 containers and marked *intravenous*. In this preparation the per cent. of globulin is only one-half of that in the ordinary antitoxin.

The intramuscular method, however, has none of these disadvantages and may be given quickly and easily. Where quick action of the antitoxin is required in general practice it is, I believe, the best method used alone or in combination with a subcutaneous injection. It is least painful and inconvenient if given into the vastus externus.

The dosage for intravenous injections is about 5,000 to 20,000, and for intramuscular injection 10,000 to 40,000. In comparatively mild or moderate cases where all the serum used is being given by either one or the other of these ways a considerably smaller dose may be given than would be necessary if the subcutaneous method was used. Ten thousand units intra-

venously or 20,000 intramuscularly I would consider quite as good or better than 50,000 units under the skin.

For a severe nasopharyngeal case then the first dose should consist of ten to thirty thousand units given intravenously or intramuscularly and fifty thousand units given subcutaneously. The patient should be seen every six hours, and if no improvement is observed—that is to say, if the membrane is not beginning to curl at the edges and show signs of separating, and if the pulse rate is not decreased nor the nasal discharge abating and the general toxic condition improving, the subcutaneous dose should be repeated after twelve hours, and in the very worst case with profound toxæmia if necessary again at the end of another twelve hours. That is to say, even in the worst cases all the antitoxin that is required should be given in the first twenty-four hours.

Laryngeal cases, if there is no other lesion, as a rule do not show the more severe forms of toxæmia, due no doubt to the peculiar arrangement of the lymphatics in that situation and consequent poor absorption of the toxins. Hence neither do they require as a rule very large doses of serum. It is essential though that the antitoxin given act at once, and intravenous, or failing that intramuscular, injections should always be used if complete obstruction of the larynx and consequent intubation is to be avoided.

When the case is a so-called *septic* one, that is, diphtheria plus a complicating septic organism, the prognosis is most uncertain, as it is not to be expected that the diphtheria antitoxin will here have the same effect.

Antitoxin treatment having been given then what sequelæ are to be expected and what is their importance? Apart from a local irritation at the point of injection and a rise in temperature of one or more degrees, both lasting for twenty-four to forty-eight hours, the other sequelæ may be summed up under the single heading anaphylaxis. This question comes into consideration when dealing with the prophylactic treatment of diphtheria, because every person who receives a preventive injection of antitoxin serum is said to be rendered hypersensitive to horse serum, and hence if he subsequently (within three years) developed the disease, the use of antitoxin would be likely to be followed by a more or less severe anaphylaxis. The

amount of stress laid on this point has, I believe, been unfortunate, for while anaphylaxis certainly occurs in experimental animals its occurrence in man is very rare, less than fifty fatal cases being recorded in the literature, and the majority of these, in the view of many observers, being in cases of status lymphaticus and asthma. Moreover such cases as I have met with, or read directly of, occurred following the first injection of serum and so would come under natural hypersensitiveness rather than under true anaphylaxis which is generally regarded, perhaps illogically, as the phenomenon occurring as the result of a previous injection of serum which has rendered the patient hypersensitive. These phenomena occur after the injection of normal horse serum and are in no way due to the antitoxic bodies contained therein.

The severe and fatal anaphylactic reactions occur immediately upon the injection of the serum. In the less severe cases of shock which terminate in recovery the patient is collapsed and suffers from distressing dyspnoea. The face becomes cyanosed and oedema appears rapidly. The pulse is small, soft and rapid. An urticarial or scarlatiniform rash appears in a few minutes. The treatment is as for shock, adrenalin being the most useful drug.

Apart from the severe anaphylaxis as above, some milder demonstration may be expected anywhere from the second day to the fourth week, but more usually occurring between the seventh and eleventh days, and which is generally spoken of as the *serum rash* or *serum sickness*. The symptoms of this latter reaction vary considerably, but the chief ones are: 1, Rashes; 2, pyrexia; 3, arthralgia; 4, slight oedema; 5, vomiting, which occur separately or in combination.

The rashes are the most common symptom and are often unaccompanied by any constitutional disturbance. They last anywhere from twelve hours to two or three days and present varying degrees of irritability. The most frequent type of rash is the urticarial, but multiform erythema and scarlatiniform types are not infrequently seen. The latter type is often very difficult to differentiate from a scarlatinal infection. The percentage of serum phenomena varies greatly, running from ten to sixty. They occur as would be expected in direct ratio to the amount of serum injected, but some individual suscepti-

bility is also very evident. The treatment is local and palliative. Morphine and bromides internally and a soothing lotion externally.

In cases which have had a previous injection of serum it is customary to attempt desensitization by the injection of a minute dose, say 0.5 c.c., subcutaneously, and then give the required dose after four hours. It is advisable also to avoid the intravenous route in a second injection. Park states that there need be no fear in giving a second intramuscular or subcutaneous injection to any person who has not suffered severely from the first, and such has been the experience in the hospital. Ker states that it is most undesirable that serum treatment should be delayed or withheld on account of these risks, which often seem to be exaggerated and which certainly are very exceptional.

This view of anaphylactic reactions to antitoxin makes the question of *prophylactic* treatment very easy. Immunization must be practised whether the contacts are carriers or not, and there are but two possible methods: 1, Injection with antitoxic serum; 2, inoculation with toxin-antitoxin mixture. The first confers a passive immunity of short duration, the latter an active immunity which is likely to last for some years; but as time is required to secure results by the second method, it is not suitable for dealing with actual contacts, and for the purpose at present under discussion prophylactic injections of serum must be employed. The protection is established in about twenty-four hours and lasts for approximately three weeks. The amount of antitoxin used for this purpose should be 500 to 1,000 units, the former being sufficient for small children. Serum sequelae are extremely rare following this small amount.

For doctors, nurses and others exposed constantly to diphtheria it would be advantageous to employ the Scheek test as a preliminary, and if this be positive to secure an active immunity by the use of toxin-antitoxin mixture. The theory is that the mixture is not very stable, and that when injected sufficient toxin becomes disassociated to stimulate the production of antitoxin. The mixture used consists of a lethal plus dose of toxin to each unit of antitoxin. Three injections of the

mixture are usually given one week apart, the dose being for an infant 0.5 c.c. and for an adult 1 c.c.

In conclusion I would say that the most important point is to give the serum *at once*. Too much stress cannot be placed on early diagnosis, which must be *clinical*, and from which it is fatal to be turned by one or two negative cultures. If the throat is suspicious antitoxin should be given and the physician is then at liberty to diagnose the case. Ten thousand units on the first day is of much more value than 40,000 on the fourth and cannot possibly do the patient any harm.

Quoting Dr. M. B. Whyte, who says:

"Knowing as I do from experience that antitoxin in large doses is harmless, and having a wholesome respect for the quickly degenerative action of freely circulating diphtheritic toxin, I prefer to err on the side of a liberal use of the serum."

With this view, I am personally quite in accord, as a result of my own observation of the type of diphtheria which we are called upon to treat at the Isolation Hospital, Toronto.

Therapeutic Periscope

TREATMENT OF ACNE VULGARIS

DR. AUGUST RAVOGLI (*Ohio Medical Journal*) states that in his experience the use of vaccine in acne has been a failure. He usually finds his patients in a run-down condition usually accompanied by constipation. The costive condition must be overcome by means of calomel or other mild cathartics, and when this is accomplished it is time to give tonics. In many cases the compound syrup of hypophosphites has given satisfactory results. Or we can give a few drops of tincture of iron and tincture of nux vomica.

So far as local treatment is concerned, Ravogli advises the patient to wash the face with tincture of green soap; then it is cleaned with an alcoholic mixture of phenol. He finds the principal local treatment to consist in the opening of the pustules and the squeezing out of their contents. In cases of acne indurata, when deep, hard abscesses are present, the abscesses are opened with a thin bistoury and with a small curette the contents are scraped off.

In a case of simple acne he lets the pustule open, washes the face with a solution of sodium borate, and then applies a layer of ung. zinci benzoatis to protect the little wound. If the bleeding does not stop he uses a solution of coagulen or hemoplastine lapenta, which covers the wounds with a gluish film.

The best application during the night is a sulphur salve, a modified Lassar paste, consisting of the following:

Flowers of sulphur,

Zinci oxidi	aa. 1 ounce
Starch	1½ ounce
Acid salicylic	15 grains
Vaselin	1 ounce

This is spread on the face as a paste and is kept on with a bandage. In cases of *acne indurata*, when the face and neck are studded with hard nodules, a stronger application is required, and for this purpose he uses a salve consisting of one drachm of ichthyol in one ounce of ung. diachylon (Hebra). In the morning the salve is removed from the face, the neck is poulticed with hot towels and is then washed with green soap. After this, he applies a lotion of carbolic acid as follows:

Phenol, 4 per cent.	1 ounce
Glycerin	1 ounce
Rose water	3 ounces
Alcohol	3 ounces

This is applied for two or three minutes, then the part is dried and a little rice powder applied.

IDIOSYNCRASY TO ALCOHOL

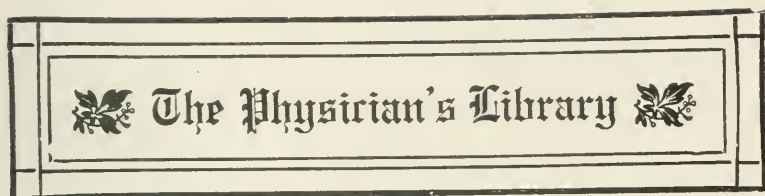
W. W. CADBURY, Canton, China (*Journal A.M.A.*, Dec. 27, 1919), reports a case of a Chinese woman with tuberculosis, who reacted to very small amounts of alcohol with mild symptoms of intoxication. The amount producing the symptoms was only 15 c.c. of elixir *terpini hydratis et diacetylmorphine*, every four hours to control the cough. Ninety-five per cent. alcohol was used in preparing the elixir, but in the mixture there would be 2.85 c.c. of absolute alcohol in solution. Each time after taking this medicine the symptoms reappeared. A number of other prescriptions were also used containing small amounts of alcohol, causing the same symptoms, and at times, even mild delirium. The symptoms were somewhat lessened by using larger quantities of water. Prescriptions containing no alcohol had no such effect, and were therefore used in her later treatment. Cadbury suggests that physicians may forget the alcoholic content of the preparation used and unwittingly produce alcoholism in patients with such idiosyncrasy.

Obituary

DR. ROBERT J. WILSON, TORONTO

It was with the greatest regret that the profession read in the daily press on Saturday, March 19th, that Dr. Robert J. Wilson had been suddenly called. The news came not with so much surprise, as the majority of our readers knew of Dr. Wilson's illness two years ago on his return from Orpington, England. Since the doctor's recovery, he had practically retired from active practice and gave his attention largely to life insurance work, with which he has been prominently identified for a number of years. The doctor was apparently quite well on the evening previous to his death, and rose from bed in the usual way on Saturday morning. He was a short time afterwards found by his sister on the bath-room floor, the spark of life having fled.

Dr. R. J. Wilson was one of the favorites in the profession, having been known intimately by the writer for thirty-six years. He was of Irish descent and was born in Toronto fifty-nine years ago. He was educated at Weston High School and the University of Toronto. He took post-graduate courses in Middlesex Hospital, London, and afterwards in Dublin, having practised in Toronto ever since—1887. He went overseas in 1916 and was on the staff of No. 4 General Hospital, at Orpington. His son, Dr. Roy Wilson, died a short time previous to his father leaving for overseas. The death of Roy was a severe blow to his father, whose health seemed to fail from that date. Surviving Dr. Wilson are his sister, Miss Emma, and one brother, Joseph.



The American Journal of Surgery. The May number of this splendid journal is devoted exclusively to "Fractures."

The following are the contributions:

"Fractures of Tibia-end-results and Ambulant Treatment," Dr. John J. Moorhead, New York City. "Treatment of Fractures of the Humerus," Dr. Joseph Blake, New York. "Treatment of Fractures at and about the Ankle," Dr. Frederic J. Cotton, Boston, Mass. "The Cerebral Symptoms and Operative Indications in Skull Fractures," Dr. William Sharpe, New York City. "Latent Symptoms from Unrecognized Fractures of the Vertebrae," Dr. Norman Sharpe, New York City. "Fractures of Fingers and Toes," Dr. Harry E. Mock, Chicago, Ill. "Early and Complete Immobilization as a Factor in the Preservation of Joint Function in the Treatment of Fractures," Dr. H. Winnett Orr, Lincoln, Nebr. "Intertrochanteric Fractures of the Femur," Dr. Kellogg Speed, Chicago, Ill. "Bedside Radiography in Fractures," Dr. I. Seth Hirsch, New York. "Fractures at the Head of the Radius," Dr. James Morley Hitzrot, New York. "Traction—Suspension—Apparatus," Dr. Henry H. M. Lyle, New York. "Pott's Fracture of the Leg," Dr. W. L. Estes, So. Bethlehem, Pa.

Optimistic Medicine, or The Early Treatment of Simple Problems rather than the Late Treatment of Serious Problems, by a former insurance man. Philadelphia: The F. A. Davis Co., publishers, 1921. Price \$3 net.

This is one of the most interesting books that has reached our review department for some time, and we have read several sections with a great deal of pleasure. *Optimistic Medicine* is

certainly out of the usual routine of books and the author is to be congratulated on his contribution to medical literature. The chapter entitled "Co-operation between Doctor and Patient" is well worth reading, taking up such phases of the family physician's life as "The Doctor at his office," "The Patient who is really repaid," and "Killing the germ of worry." Chapter VI, "The Housemother who worries," is choke-full of common sense, and "The Overworked Business Man" worthy of a careful perusal by any physician, young or old. We thank the publishers for favoring us with this volume.

A Manual of Pathology. By GUTHRIE MCCONNELL, M.D., Associate in Pathology, Western Reserve University, Medical School, Cleveland Ohio. Fourth edition, thoroughly revised. Philadelphia and London: The W. B. Saunders Company. Toronto: The J. F. Hartz Co., Limited, Canadian Agents. Cloth, \$4.50 net. 1920.

This little volume is named a manual but might better be described as a dictionary of pathology. It is too short to be of great use to the medical student of to-day as a text-book. It is more useful for nurses and the large number of the laity who are now attached to hospitals as social service workers, orthopedic helpers, massage assistants, etc. It merely gives an outline of pathological processes and makes no attempt to discuss various views and theories of various pathological subjects. The fact that this is the fourth edition of the work shows that there is a demand for such a volume.

Field Ambulance Sketches. By A CORPORAL. London: John Lane. The Bodley Head. New York: John Lane Company, 1919.

Since a lifetime would hardly suffice to read all the books that have been written about the Great War, we will each have our bookshelf of some dozen, perhaps, volumes that hold for us all that is most informative and appealing.

Each man's shelf will hold different volumes by widely differing writers, but each will hold those books that make the strongest individual appeal to the mind and heart of the owner, and not a few of us will find room for *Field Ambulance Sketches* and its companion volumes in the series. The book is an epitome of what war means to the average human lad, the youngster who sees and feels and does his bit, and tells it in words of vivid descriptive power. A little volume, but so well worth while.

The American Year-Book of Anesthesia and Analgesia, 1917-1918. (Copyrighted January, 1921). F. H. McMECHAN, M.D., Editor. Large quarto, bound in art buckram and printed on natural tint paper, 471 text pages, 175 illustrations. Containing a cumulative index of the pertinent literature for 1917-1918, and contributions by 84 eminent authorities. Surgery Publishing Co., Publishers, 15 East 26th St., New York City. Price, \$10.

The American Year-Book of Anesthesia and Analgesia, covering the advances in these subjects during 1917-1918, recently reached us in its de luxe format, making as much of a typographical as a scientific appeal. Delayed in publication by the World War, it contains those methods of anesthesia and analgesia introduced to expedite military surgery, which are to find a place for themselves in civilian practice for the benefit of all concerned.

The Year-Book, as a cumulative encyclopedia, provides the anesthetist, specialist, surgeon, dentist, research worker and hospital superintendent with those special advances that meet their individual requirements.

Aside from series of contributions on complicating and safety factors of anesthesia, acidosis, blood changes, blood pressure variations, pharmaco-physio-pathological studies both in general and local anesthesia, methods of technic, especially those developed in war surgery and the newer methods of local analgesia in surgery, dentistry and the specialties, the Year-Book

contains a cumulative index of the pertinent literature for 1917-1918, which is invaluable to anyone making a study of any phases of these subjects and needing the necessary bibliography for reference or teaching.

Refraction and Motility of the Eye. With chapters on color blindness and the field of vision. Designed for students and practitioners. By ELLICE M. ALGER, M.D., F.A.C.S., Professor of Ophthalmology at the New York Post-Graduate Medical School, etc. With 125 illustrations. Second revised edition. Philadelphia: The F. A. Davis Company, publishers. English Depot: Stanley Phillips, London. Price, \$2.50 net. 1920.

This, the second revised edition of Prof. Alger's book, is one that can be recommended highly to the post-graduate student studying ophthalmology. The chapters on refraction elucidate that difficult subject in a way that can only be done by one who has devoted many years to teaching and who has thus learned the difficulties from the student's point of view. In the chapters devoted to motility of the eye, the author has taken what is best and most useful from the various schools and harmonized them into a workable whole.

1919 *Collected Papers of the Mayo Clinic.* Rochester, Minn. Edited by Mrs. M. H. MELLISH. Illustrated. Philadelphia and London: The W. B. Saunders Company. Canadian Agents: The J. F. Hartz Co., Limited, Toronto. 1920. Price, \$13.25 net.

This is a splendid collection of papers, some of the contributors being such well-known men as Drs. D. C. Balfour, Chief in Surgery, Mayo Clinic; W. L. Benedict, Chief in Section of Ophthalmology, Mayo Clinic; R. D. Carman, Chief in Roentgenology, Mayo Clinic; M. S. Henderson,

Chief Orthopedic Surgery; H. Z. Giffin, Chief in Medicine, Mayo Clinic; E. S. Judd, Assoc. Prof., Surgery, Mayo Foundation; C. H. Mayo and his equally well known brother W. J. Mayo; and E. C. Rosenow, Chief in Experimental Bacteriology. Mrs. M. H. Mellish is, as before, the editor of the volume, and there is none better. The contents are divided into sections of the Alimentary Canal, the Urogenital Organs, Heart, Blood, Skin and Syphilis, Head, Trunk and Extremities, Nerves, and Technic. We know of no volume recently published that contains quite so much scientific material, covering in all about 1,300 pages, representing the actual work of each contributor. This volume is well worth buying.

Practical Psychology and Psychiatry. For use in Training Schools for Attendants and Nurses and in Medical Classes, and as a ready reference for the practitioner. By C. B. BURR, M.D., Medical Director of Oak Grove Hospital (Flint, Michigan) for Mental and Nervous Disorders, etc., etc. Fifth edition. Revised and enlarged. With illustrations. Philadelphia: F. A. Davis Company, publishers. 1921.

Dr. Burr in this new addition has adopted the classification of insanity as recommended by the National Committee for Mental Hygiene. He has added a chapter on the Prevention of Insanity. This handbook on insanity we can recommend. The doctor knows his work, is scholarly, writes well and is a good story-teller. When in London at the time of the Coronation he relates he visited the great pageant representing English history from the Early Britons to the present day—a show that lasted for weeks. The day of his visit was raw, wet and altogether unpleasant. Passing with his friend along that portion of the arena where the Roman occupation was about to be put on, they stopped before one of the shivering Londoners in a toga representing a noble Roman, and inquired if their surmise was correct that he was Appius Claudius. "Lor', hummy, no," responded the cockney. "I am un'appy as 'ell."

AN IDEAL RESORT FOR CONVALESCENT PATIENTS*

PHYSICIANS have frequent opportunities of referring those convalescing from illness to a resort where they can quickly recover their old-time vigor and enjoy an almost ideal climate, 2,500 feet above sea level. Such a resort is Virginia Hot Springs, just one night out of New York. The management have spent a huge sum of money on this choice spot in "Old Virginny," and are anxious that the Canadian medical profession should continue to refer cases there, as they have done in years gone by. The Homestead Hotel is one of the handsomest houses in America. It is built of solid brick, containing 500 guest rooms, with many parlor suites and 300 private baths. It is spacious, dignified, quiet and restful, with magnificent mountain views on every side. It is no exaggeration to say that Hot Springs means the Homestead Hotel. The Company owns 5,000 acres surrounding the hotel, so that physicians can understand that their patients have every opportunity of enjoying outdoor life and regaining thereby their normal strength.

The dominant factor making Hot Springs world-famous is the cure in which the climate as well as the water assist. The waters are conducted by gravity to the bathhouse and distributed fresh from the ground to the bathing apartments on different floors without loss of heat or its increase by artificial means, and fully charged with all their gases and other health-giving qualities. At none of the celebrated places in Europe, and at no other springs in America, is the temperature prescribed for hot baths that at which the water actually emerges from the earth in the natural springs.

The springs are beneficial, not only for bathing, but for drinking. Besides the hot springs, the effects of which as drinking waters are pronounced, there are magnesia, sulphur, and soda springs within the grounds, and alum water from a spring not far distant. The water from the soda spring comes strong and clear from the ground at a uniform temperature of 74 degrees. Physicians should address for full information Christian S. Andersen, Esq.

*Publishers' Department.

DEMINERALIZATION AND RECALCIFICATION*

Numerous works on demineralization have recently been published.

During the war, as might have been expected, the causes of demineralization were increased by fatigue, emotions and restrictions of all kinds; the tuberculous and the gassed soldiers alone presenting a vast field for investigation.

It is no doubt important from the standpoint of the treatment of demineralization to know the needs of the organism, but it must be admitted that it is not always sufficient to prescribe the substances that are excreted in excess in the urine. We should choose with more precision the medicines which through their re-action in the media of the organism, have proven most effective and are devoid of immediate or remote ill effects.

Tricalcine is the preparation most frequently employed at present for recalcification. It is still the most certain means of re-establishing the equilibrium and of counteracting nutritional disturbances so frequent in subjects lacking in mineral salts.

GUM CHEWING*

THE habits of many people on this continent who chew gum after meals is not without reason, though they may not be able to give a rational explanation of why they do so.

The American spirit is eager and quick; and its incarnations hurry to work, hurry to and during meals, hurry home, hurry to their pleasures, and hurry to bed.

Their minds are exceedingly active. These they stimulate in various ways—notably by taking coffee and by gum chewing.

The resort to the use of chewing gum arises, in part, from the fact that they have swallowed their meals too rapidly. As a consequence the potatoes and other starchy foods are improperly masticated and insalivated. So they chew the gum, swallow the saliva containing the ptyalin enzyme. The action of swallowing stimulates stomachic peristalsis, which hurries

*Publishers' Department.

the food contents rapidly into the duodenum, where the starches are further acted upon by the pancreatic juice. The secretion of saliva is under the control of the nervous system. It is a reflex action. Under ordinary conditions it is excited by the stimulation of the peripheral branches of two nerves, the gustatory or lingual branch of the inferior maxillary of the fifth nerve and the glosso-pharyngeal part of the eighth pair of nerves which are distributed to the mucous membrane of the tongue and pharynx conjointly. The stimulation occurs on the introduction of, such as, gum or other confection into the mouth, thus assisting the process of normal digestion.

Chewing of gum also cleanses the teeth by removing particles of food which may have lodged about them. The process of attrition likewise tends to keep the teeth polished.

Further, we have no doubt that chewing gum through reflex action stimulates cerebral activity and enables the chewer to think more rapidly and more clearly.

When food enters an empty stomach, as happens at the beginning of a meal, the acid first secreted combines with the proteid food stuffs and so does not affect the ptyalin. It usually requires 15 to 20 minutes before the acid is secreted in sufficient quantity to be in excess, as free acid, of the amount which can combine, with the proteids and during this time salivary digestion may continue. Of course, the action of ptyalin on food taken later in a meal is promptly stopped when it reaches the stomach because of the presence of free acid. There is, therefore, a good deal to be said in favor of the use of chewing gum immediately after eating.

A SIGN OF THE TIMES*

MORE and more and medical man is noticing the label on his purchases, "Manufactured by E. G. West & Co., Wholesale Druggists, Toronto." This label means that any purchaser of E. G. West & Co.'s preparations is at liberty at any time to return goods at the seller's expense, if not entirely as represented or in every way satisfactory.

Write for a list of specialties and prices.

*Publishers' Department.

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Editorial

PRESCRIPTIONS

SATURDAY NIGHT, of March 12th, in speaking of the doctor's mistake in giving Neodiarsenol for Diarsenol, and of the druggist's mistake in dispensing barium sulphurette instead of barium sulphate, claims that "the entire system should be revamped and brought up to date, in the interest not only of the general public, but of physicians and chemists as well."

It adds "The opportunities for error in drugs of similar names but dissimilar action is greatly augmented by the use of the telephone for hurry calls by the medical profession, an opportunity for blundering which did not exist at the period when the present therapeutical system was established."

We agree that it is a mistake to call two drugs, to

be prepared dissimilarly, by like names—as Neodiar-senol and Diarsenol. Such nomenclature should be prohibited by law.

As to barium sulphate, the prescription showed these two words written in full, and no fault can be found with the doctor's penmanship. We think, however, the doctor, instead of writing "use as directed," should always particularize as to whether the medicine is to be used internally or externally.

Respecting the telephoning of prescriptions, the custom is for druggists to repeat back to the physician plainly everything—name of patient, address, name and amount of each ingredient, and the directions fully, with his own name. In the case of poisons, we would suggest that the druggist call an assistant to listen to the doctor repeat the prescription again, or, if he has no assistant, that the prescription be again dictated by the physician and again repeated back by the druggist.

In the cases cited by *Saturday Night* we cannot see that Latin is at fault. The writer of the *Saturday Night* item says: "Did you ever glance over the hurriedly and often badly written prescription of the family physician? If so, you will wonder why more fatalities do not follow. The average patient, not being a Latin scholar, has no check, and it is doubtful if the ordinary drug clerk is as familiar with the dead languages as he should be."

It never was intended that the patient should read over his prescription. Too many of them learn too

much of what is prescribed for them and go on repeating the medicine for themselves. And so we have the lavish purchase of aspirin and many other drugs by the laity without prescription, much to the detriment of the public health.

If the average drug clerk cannot translate the little Latin used in prescription writing—which may happen once in five hundred prescriptions, all he has to do, and does, is to hold off dispensing or writing directions until he can communicate with the physician who wrote the prescription, or with some older druggist, who will cheerfully translate the Latin for him, or look up the terms in his office volume on pharmacy.

Prescriptions may appear to be hurriedly written, but most men, we think, read over the prescription they have written a second time to see that it is all right. It may appear to the uninitiated laymen to be carelessly and not plainly written, when such is not the case.

The reports of these sad cases will, we are sure, cause doctors to take greater pains than ever before to speak plainly when naming drugs or dictating prescriptions, and in a legible hand and with sufficient explicitness write such prescriptions as require to be written.

Since writing the above we have received from Mr. Irving Cameron the communication found on another page, which should appeal to both physician and druggist as safe and conservative in its pronouncement.

THE MEDICAL CONVENTIONS

WHILE winter is the period in which the weekly meetings of the Urban Medical Societies flourish, the big Provincial and Dominion Associations await the coming of summer. The Ontario Association at Niagara Falls, and the Dominion meeting at Halifax, should be largely attended.

Through the ardent efforts of Mullin, Bingham and Routley, and others, these two associations have been well boosted during the past year; the membership in both has swelled, and much interest has been stimulated in the work of both, by the visits of these gentlemen named to various parts of the country. The result will be an increased attendance at both these conferences, a better programme, and a general stimulation of the whole medical body, which will result in better practice, and better conditions generally, both for doctors and laity.

VACATION

EVERY man needs a vacation,—we medical men just as urgently, if not more, than any laymen. After the stress and strain of a winter's work a few weeks at the seaside, in the woods, on a slow ocean liner; a visit to Alaska, Hudson Bay, Europe, Asia, or Australia, will do one a world of good.

Unfortunately, a doctor is a poor patient, seldom seeks advice for his own troubles, which he too often

minimizes or forgets in his absorption in the cases of his patients. This is wrong. He should consult his fellow-practitioner for his own ailments, be they trivial or serious, and abide by the advice given.

We feel sure that for most men a holiday should be prescribed; the wise men will heed our advice and break away.

A week at the Falls after the Ontario meeting or at Halifax and in Nova Scotia after the Dominion meeting,—what could be better?

Canadian Journal of Medicine and Surgery

Toronto

Canada

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Address all communications to "The Canadian Journal of Medicine and Surgery," 145 College Street, Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the first of the month previous to publication.

Reprints, including halftones, etc., supplied authors at net cost.

Original Contribution

REMEDIAL MASSAGE*

D. J. McDougall.

Instructor in Massage, Canadian National Institute for the Blind.

The object of these few remarks is primarily to interest you in massage as an accessory in the treatment of certain forms of disease and injury. Incidentally I desire to bring to your attention the work which is being done by a number of blind masseurs in various parts of the Dominion, and the efforts of the Canadian National Institute for the Blind to train men for this work. The extensive use of massage in the military hospitals and convalescent camps of Great Britain during the war, and the success with which it was attended, warrant the belief that this form of treatment will, in the future, be more widely used in the treatment of disease and injury among the civil population. With this in mind, and knowing from the experience of St. Dunstan's Hostel for Blinded Soldiers and of the National Institute for the Blind, London, England, that this is a vocation for which certain members of the blind community are eminently adapted, the C.N.I.B. has equipped a school of massage at Pearson Hall, 186 Beverley Street, for the training of both military and civil blind.

The course of instruction has been modelled on that required by the Chartered Association of Massage and Remedial Gymnastics, London, England. It includes instruction in anatomy, physiology, the theory of massage and movement, and the pathology of those conditions in the treatment of which massage has been found successful. Remedial gymnastics form

*Read at the Academy of Medicine, Toronto (by invitation).

an important part of the course, and the students are carefully drilled in exercises for the correction of deformities and other conditions. Special attention is given to practical treatments, and for several months prior to completion of the course the men employed in the out-patients' clinic at Euclid Hall, where their work is carried on under close supervision. The men take the examinations of the Canadian Association of Massage and Remedial Gymnastics, and become members of that body.

The Canadian Association of Massage and Remedial Gymnastics was organized in November, 1919, with the advice and assistance of the late Col. Wilson. Branches were established in Toronto and Montreal, and in March, 1920, it was incorporated by Federal Charter. The officers of the Association are Miss E. M. Cartwright, School of Physical Education, McGill University, President; Mr. D. J. McDougall, Instructor in Massage, Canadian National Institute for the Blind, Toronto, Vice-President; and Miss L. J. Longworth, Royal Victoria College, Montreal, Secretary. Among the members of the executive are Mrs. Bruce Robertson, formerly Supervisor Military School of Orthopedic Surgery and Physiotherapy; Miss Ada McLanghlin, formerly Supervisor of Treatment Departments, Davisville and Dominion Orthopedic Hospitals, Toronto; and Miss Ethel Turner, who has been for many years practising massage in this city.

Some of the objects of this Association, as set forth in the preamble to the constitution, are:—

To form a Dominion-wide organization for their improvement in the professional status of persons engaged in the practice of massage and remedial gymnastics under medical supervision.

To establish a uniform curriculum of studies and standard of qualifications by means of a central body granting certificates of qualification.

To provide a bureau of information and a central register of persons so qualified available to the medical profession and to the public.

To promote the active co-operation of the medical profession, the hospitals and the universities of Canada.

Among the members of the Association are graduates of the School of Physical Education, McGill University; those who have passed the examinations of the Pennsylvania State Board; and members of the C.A.M.R.G., London, England. A minimum of six months' training under properly qualified instructors is required. The graduates of the M.S. of O.S. and P. are admitted to membership, and courses are conducted by the Association in parts of the work which were not deemed necessary for military practice, and hence were not included in their training. The first of these courses was conducted at McGill University in March and April of last year. The second has just been concluded in Toronto. During the latter course twenty-eight students were trained, and the Association is indebted to many prominent Toronto doctors for assistance by lectures and demonstrations. The members of the Association *pledge themselves to undertake no cases of massage treatment except under medical direction.*

By the term "massage" is meant a series of manipulations and joint movements, each one of which has been carefully studied, and its probable effects on the various tissues of the body determined. It is not regarded as a "cure-all" nor as a system of medicine, but merely as an accessory which can be of material assistance in the treatment of certain types of disease and injury. In addition to the generally refreshing effect which is commonly associated with massage, a few of the most noticeable effects may be enumerated.

1. The relaxation of spasmodic and tonic contraction of muscles by light stroking in recent fractures and other injuries.
2. The quieting and relaxation of tensely-contracted and quivering muscles by steady rhythmical stroking, especially of the back, in functional derangements of the nervous system.
3. The relaxation of spastic contraction by rhythmical stroking and kneading in lesions of the upper motor neuron.
4. The relief of pain by slow rhythmical stroking in neuralgia and neuritis, and the recovery of muscle tonicity by more stimulating movements following an attack of neuritis.

5. The maintenance of tissue nutrition and of joint mobility, and the prevention of deformity in lesions of the lower motor neuron.

6. The recovery of muscle tone, the absorption of effusion and the strengthening of joint supports following joint inflammations.

7. The maintenance of joint and muscle mobility in the treatment of recent sprains and dislocations.

8. The reduction of edema by deep stroking and kneading of parts approximal to the swelling.

9. The relief of labored heart action, the lowering of blood pressure, and the building up of compensating hypertrophy by stroking and muscle kneading and joint movements in the treatment of valvular disease of the heart.

10. The stimulation of the lung tissue and the dispersal of congestion in the period of relaxation following pleurisy and influenza. Percussion and vibration over the thorax is the movement used.

11. Improvements of digestion, absorption, and elimination of feces in visceroptosis, constipation, indigestion and following parturition and abdominal operations.

12. In the treatment of constitutional diseases such as anemia, gout and rickets, and in the period of convalescence following fevers material assistance may be given by the use of general massage to improve tissue metabolism, and to relieve abdominal symptoms.

Following are a number of cases which demonstrate the beneficial effects of massage treatment:—

A case of Colles' fracture in a patient aged sixty-five. The case was under the direction of Dr. R. R. Harris, and massage treatment was ordered three days after the injury occurred. The treatment was continued for four weeks, and resulted in complete recovery with no loss of movement in any of the joints of the limb.

A case of fracture of the distal extremity of the humerus. The elbow was set in extension and became immobilized in this position during the period of healing. A course of treatment by massage and passive movement resulted in sufficient

mobility to allow patient to carry on his former occupation of hair-dresser. This case was treated by a blind masseur in St. Andrew's Hospital, under the direction of Major Rice.

A case of Lower Neuron Paralysis. Hemorrhage in the neural canal, causing pressure on the Cauda Equinae resulted when this man fell from the roof of a building on which he was working. There was complete paralysis of the left lower extremity, with marked atrophy of muscles. The accident occurred in June, and massage treatment was started in September, when a certain amount of recovery had been made. Since the middle of September he has been treated every day. He has gained nineteen pounds in weight, and the musculature of the left lower extremity is almost entirely recovered from the atrophy. Weakness of the lower limbs remains, and the massage treatment is being replaced largely by remedial gymnastics to restore muscle tone. Stimulating general massage of lower limbs and back was used in this case. The patient was referred for treatment by Dr. J. McCollum, 12 Avenue Road.

During September and October, the students taking post-graduate course treated fifteen parturition cases in the Toronto General Hospital under the direction of Dr. B. P. Watson, and in every case the treatment proved beneficial and materially hastened recovery.

A post-operative abdominal treatment. This patient was treated in the out-patients' clinic Euclid Hall under the direction of Dr. Bruce Barnes. The patient was operated on for volvulus of the intestines, leaving a scar in the right iliac and right lumbar regions. The treatment at Euclid Hall started some six months after operation. The abdominal muscles were atonic, and the patient suffered greatly from constipation, flatulence, and indigestion. Approximately three months' treatment was given, at the end of which time the indigestion and flatulence had disappeared and the patient was having regular motions of the bowels, with little or no recourse to purgatives. The treatment consisted of general massage to the abdomen, with passive movements and active exercises to recover the tone of the abdominal muscles.

A case of chronic constipation was referred for massage treatment about the middle of September by Dr. H. Feader. The patient's occupation precluded the possibility of fresh air and exercise, and the abdominal muscles were weak and flabby. Strong stimulating massage was given to the abdomen and back, with passive movements and graduated active exercises for the abdominal muscles. The treatment was discontinued at the end of October, and although the patient had not entirely recovered, a good deal of improvement in his condition was apparent. The movement of the bowels was fairly regular, and the abdominal muscles were very much stronger. A number of simple exercises were given this patient to be done in his own home.

A case of septic poisoning of the hand and forearm following an industrial accident. When the septic condition had been cleared up massage was ordered. There were several incisions on the forearm, the wrist and fingers were stiff and flexed, and there was considerable atrophy of the muscles. After four weeks' treatment the patient returned to his former occupation. The case was referred by Dr. H. Grundy.

Miss B—— suffered a slight injury to the knee joint during a game of tennis. The doctor ordered an elastic stocking for a few weeks, but the young lady exceeded the order and continued to wear it for two years. The result was extreme atony of the quadriceps and muscles and looseness of the knee joint, so that the patella was constantly slipping off the trochlear surface of the femur. This became so bad that on more than one occasion it slipped when the lady rose from a chair. The case was referred for massage treatment by Dr. C. L. Starr. Light massage and passive movement was given at first, and later stronger massage and active movement. The exercising continued until the patient was able to walk five miles a day. The patient has been leading an active life for the past two years, and the knee has given no trouble whatever.

In conclusion I wish to refer briefly to the work of the blind masseurs in hospitals in various parts of Canada. These men are employed in D.S.C.R. Hospitals in Halifax, Montreal, Ottawa, Toronto, Calgary, Vancouver and Victoria, and others

are engaged in private practice in Toronto, Port Arthur, Fort William, and Victoria. As to the quality of their work I can best serve my purpose by relating the experience of medical men who have employed them.

The following is a copy of a letter written by Sir Robert Jones, Inspector of Orthopedics, Aldernay Orthopedic Hospital, Liverpool, to Sir Arthur Pearson, St. Dunstan's Hostel for Blind Soldiers, London, England:—

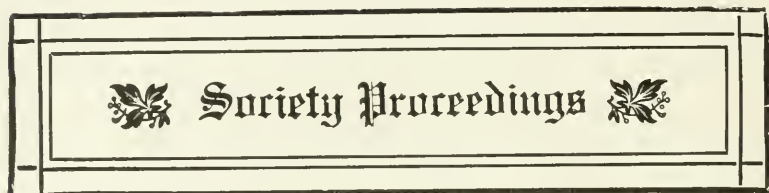
Dear Sir Arthur,—The work which your blind masseurs do is very exceptional in quality. They are in every sense of the term a great success. I find them all intelligent, and possessed of a wonderful sense of touch, together with keen enthusiasm for their work. Apart from their qualities as masseurs I think they have an extraordinary good psychological effect upon their patients. I consider institutions which secure the services of these men very fortunate.—(Signed).
ROBERT JONES.

The following is an extract from a letter written by Major L. M. Rice, St. Andrew's Hospital, to the Superintendent of Pearson Hall:—

“Mr. Graham takes a great pride in his work. He shows a personal interest in every patient with whom he works. His sense of touch is wonderfully developed, and in this way he learns often more about his patients than others who have their sight. Altogether Mr. Graham is one of the most efficient workers in this department.”

The following is an extract from a letter written by Dr. G. E. MacCartney to the District Vocational Officer, D.S.C.R., Port Arthur.

“I have employed Mr. M. C. Robinson in a large number of cases, and find he is one of the most efficient, intelligent, and well-trained masseurs I have ever had. The opinion of the doctors in Port Arthur and Fort William is identical with mine.”



TORONTO ACADEMY OF MEDICINE

THE stated meeting of the Academy on February 1st was of unique interest, as it was devoted to the examination of old books, a symposium on syphilis, and a fine paper on Pre-Harveian conception of the circulation by Dr. Paul M. O'Sullivan.

Dr. J. H. Elliott, president, opened the meeting, calling attention to the book exhibits, which was inspected by the Fellows after the programme of papers was over. In addition to the library collection in the Academy, the president's own valuable "finds" were on the tables for examination. A few of the books were:—

History of Syphilis—Hooper's Medical Dictionary, 7th edition, 1839, commencing at page 1251.

Boerhaave's Aphorisms. MSS. Vol. 3. Lues Venerea, pp. 1315-1327. The date of this book is uncertain. It belonged to Sir James Y. Simpson, of Edinburgh.

Spina Ventosa and Lues Venerea, p. 1241. Exostoses and Lues, p. 1255. Boerhaave's Aphorisms. MSS. Vol. 2.

Armamentarium Chirurgicum, Johann Scultetus. Hagae-comitum, 1657. De Gunmate Gallico, pp. 187, 238, 287, 137, 133. Gonorrhoea Virulenta, p. 295.

Sydenham. The History and Treatment of the Venereal Diseases. Swan's Sydenham, London, 1753, pp. 332-365. Use of Mercury, pp. 352-361. Salivation, p. 356.

He notes, p. 361, that mercury will cure a confirmed pox, but will not cure a gonorrhea.

De Re Anatomica, Paris, 1572. Matteo Realdo Colombo. The first edition was published in 1559, six years after the burning of Servetus and his books by John Calvin. Garrison.

the historian, says "Columbus may have plagiarized his facts on the pulmonary circulation from Servetus, as he did other things from Vesalins.

Bibliotheca Anatomica Medica, etc., Vol. 3. London, 1714. A collection of papers, translations and digests by noted authors—on the circulation, venereal diseases, and on mercury.

Galen believed that the arteries conveyed blood, but his false conception about the pores in the ventricular septum diverted all speculation into the wrong channel for over fourteen centuries.

Sir Michael Foster's story of "Harvey and the Circulation of the Blood."

Galen's *Theory of the Vital Spirits*, reprinted in a volume ascribed to Aristotle. Edinburgh, 1788.

John Wesley's book on family medicine, entitled "An Easy and Natural Method of Treating Most Diseases." Bristol, 1768. 13th edition.

A facsimile reproduction of the first edition of Harvey's "De Mortu Cordis," published in Frankfort, 1628. He delivered his lectures on the subject first at the College of Physicians, London, about 1615. The various editions of Harvey's works.

Harvey's "De Mortu Cordis," in Latin. Roterodami, Leers, 1691. Engraved title page, 1661. This edition does not appear in the list of editions contained in Weir Mitchell's bibliography, which includes all known editions.

Spice was added to the mental feast over a clash of opinion respecting the origin of syphilis. Hon Justice Riddell gave a scholarly paper on the origin of the word syphilis. He held that the disease was introduced into Europe by the sailors of Columbus upon their return from the discovery of America. Dr. John Ferguson, who discussed pre-Columbian syphilis, agreed with Justice Riddell. This idea was opposed by Dr. H. B. Anderson, who discussed post-Columbian syphilis. After the epidemic of 1493 the disease was described under various names. It was later recognized as an entity and differentiated from leprosy, plague and other diseases, with which it had been confounded. Frascatorius (1530) introduced the term lues,

and later syphilis. Jextor (1550) described the ulcerated chancre and the non-ulcerated variety; also the extra-genital. Sydenham (1679), Turner (1717), Hunter (1786), Astruc (1740), all believed gonorrhea and syphilis to be manifestations of the same disease—the former being primary. Fallopius (1555) described the hard chancre as the primary lesion. It was also described by Paré (1575) and De Blègny (1673). John Hunter (1786) first accurately described the indurated sore and its pathognomonic character. Made human experiments, inoculating himself. Boerhaave (1735) believed gonorrhea a preventive of syphilis. Benjamin Bell (1793) recognized the non-identity of gonorrhea and syphilis, a view previously pronounced by Lode—a Dane (1776). Hernandez, however, finally established the differentiation. Bassereau (1852) and Record (1857) definitely established the differentiation between the hard and soft chancres; Record divided the disease into its three periods—primary, secondary and tertiary. Among the causes of syphilis were mentioned—stellar and planetary, miasmatic, poisoning of wells, coitus with a leprous woman or with apes, horses, etc., contagions or infections (not necessarily venereal) during the great epidemic: *to imperceptible worms or animalculae*—Blankard (1684), Deidier, Desault (1732), and Ballay (1762)—Boerhaave opposed this idea; fermentation of semen in the vagina of prostitutes, excesses, promiscuous intercourse, etc.; communicated by the breath: Henry charged his infection to Cardinal Wolsey's breath! Lastly, it was thought to be caused by gonorrhea.

John Hunter, though ingenious in experiment and a close observer, was not correct in his inferences. He held (1) that morbid actions are incompatible with each other; (2) that gonorrhea and chancre were due to the same morbid poison—the effect varying according to the tissue involved. He observed (1) that chancres occurred two months after the cure of a gonorrhea; (2) gonorrhea cured without mercury and no lues after; (3) that gonorrhea was not usually followed by constitutional symptoms; hard chancre always. He inoculated himself with gonorrheal pus and chancres, and developed bubo

and general symptoms. He advised patients that coitus was safe after infection, but before appearance of discharge, and also if urethra was cleansed by injections. He did not believe in the contagiousness of secondary lesions. As stated, he first accurately described the sore that bears his name.

Bell held that the gonorrhea and syphilis were distinct diseases; that the former could be cured without mercury—the latter only by its use. Gonorrhea was never followed by constitutional symptoms unless the patient is infected by the two poisons at the same time. He recommended injections.

In proof of the existence in Europe of syphilis before Columbus' sailors returned from America, the essayist stated that Pope Alexander VI wrote to Charles VIII to dissuade him from attacking Naples because of the plague of inguinal buboes then raging in Italy. Leocineus, the first Italian writer on the subject, does not mention the American theory—1497 A.D. He compares the disease to ancient leprosy. Jorella, commissioned to write on the Neapolitan disease (1500), does not suggest that it came from America, and says it began in Auvergne in 1493. Aquitanus, a contemporary, considered it an ancient disease. Scanarolius (1498) does not refer to the Neapolitan story of its origin. Hock (1502) says this contagious disease began its ravages as early as 1483. Galicet places its origin back to 1457. Fulgosis (1509) mentions a new disease which appeared two years before the siege of Naples. Pomarus (1496) refers to its appearance in Saxony in 1493. It is not referred to by Columbus or anyone who accompanied him after his return from his first voyage in 1493, nor until 30 years later.

References bearing on the American origin of the disease:—

THEORY OF AMERICAN ORIGIN.

1. Nicolas Poll, a German, in 1517, mentions guaiac, obtained from the Spanish West Indies, as a cure for the disease.
2. Leonard Schmans—another German—in 1518 was the first who positively asserted American origin.
3. Ulrich Von Hutten, a German knight, himself suffering

from hereditary syphilis, which mercury failed to cure, accepted American origin and extolled virtues of guaiac, which cured him.

4. Oviedo—1478-1547—Viceroy to Mexico and the Antilles, began his history in 1525, in which he upholds American origin. He is discredited by Las Casas, the historian of the West Indies.

A work published in 1509 by Diaz de Isla, a Barcelona physician in 1493, when lues first made its appearance, and for ten years surgeon to All Saints Hospital at Lisbon. He considered the disease to be new, and to have been brought from Hayti.

6. Jean Astruc, Professor at Montpellier, and physician to Louis XV, a voluminous writer, and for many years the outstanding authority on syphilis, whose work, "*De Morbis Veneriis Libri Novum*," appeared in 1740.

7. Fallopius, Sydenham, Hunter and others accepted the theory of the American origin without personal investigation; but later the view was combatted by Beckett (1719), Lancereaux, Record, Burt, and most recent investigators.

AMERICAN MEDICAL EDITORS' ASSOCIATION

THE 52nd annual meeting of the American Medical Editors' Association will be held at the Hotel Lenox, Boston, Mass., on Monday and Tuesday, June 6th and 7th, under the presidency of Dr. H. S. Baketel, editor of the *Medical Times*.

A novel feature of our literary programme will be introduced this year in the shape of symposia, which will be discussed by various members. The subjects will be: "Group Practice and the Diagnostic Clinic," "What Should be the Attitude of the Profession Toward Health Centres," "The Correlation Between Editorial, Advertising and Subscription Work."

Every doctor, even remotely interested in medical journalism, will find it to his advantage to attend, and is most cordially invited.

TORONTO ACADEMY OF MEDICINE

THE 13th annual report of the Toronto Academy has been received—a reprint from the *Canada Lancet*. The retiring president, after referring to the very successful work done during the year, directs attention to the fact that large corporations are getting control of drug stores and adopting many methods that are quite foreign to the good old-fashioned prescription druggist. Cut-rate and cheapening seem to be the trend of the times. While fewer drugs are prescribed than formerly, it is essential that these should be of the highest quality and dispensed most accurately. Such is not the case, however, e.g., in prescribing salicylate of soda, unless the natural product is indicated, the synthetic is used. The former is seven times as dear as the latter; the latter much inferior in so far as results are concerned.

Proceeding, Dr. King pertinently remarks that the nursing question is still full of unsolved problems. The cost of employing a trained nurse is a very important one to the patient. Wherever possible the doctor should “help our patient to our utmost.” Dr. King states that 75 per cent. of our cases can easily be entrusted to the semi-trained nurse. In more than that percentage of cases one nurse is all the patient requires.

Respecting hospitals, the retiring president asserts that the two nurses to one private ward patient is a luxury that only the newly rich can afford. Dr. King surely intended this statement to embrace the old rich families as well. To treat these cases—requiring so much nursing—in the home is very often an impossibility; to transfer them to a hospital with the increased expenditure this move implies, is “away beyond the means of the middle or salaried class.” Dr. King inquires, “How can this matter be met?”



Correspondence



The Editor cannot hold himself responsible for any views expressed in this Department.

FATAL ERRORS OF DRUGGISTS AND PHYSICIANS

It would seem that the time is opportune for a complete revision of methods pertaining to therapeutics. From time to time the newspapers report cases of error, either on the part of the druggist or the physician, which prove fatal to the patient. So common have these mistakes become that no one but a fatalist will now take what a physician prescribes and the druggist hands out, without fear and trembling. Of course, if we all kept a stock of white rats and rabbits to experiment on before we took these doses more would probably escape an untimely end. But such live stock is not kept in the ordinary household.

Unquestionably the general use of Latin in relation to medical terms and medicines is to blame for a good deal of the trouble. Did you ever glance over the hurriedly and often badly written prescription of the family physician? If so you will be given to wondering why more fatalities do not follow. First of all the average patient, not being a Latin scholar, has no check. And I doubt if the ordinary drug clerk is as familiar with the dead languages as he should be, if the present system is to continue.

Then again, medical science has decreed, for some reason not understandable to the man on the street, that one set of drugs, deadly poisons, should bear names intimately associated with other drugs of an exactly opposite effect. For instance, take the case of Neodiarsenol and Diarsenol; one given in mistake for the other in Toronto recently, the physician's error, caused the death of two people. Again, even more recently, death was caused by a patient taking barium sulphurette in place of barium sulphate, this time the mistake of the chemist, who apparently did not know that the one he gave in error was a

deadly poison. Owing to the twisting of medical terms in connection with these two drugs and the fatalities which have followed, it has been found necessary in the United States to distribute warning form letters to the chemists. The opportunities for error in drugs of similar names but dissimilar action is greatly augmented by the use of the telephone for hurry calls by the medical profession, an opportunity for blundering which did not exist at the period when the present therapeutical system was established.

It is time that the entire system was revamped and brought up to date, in the interest not only of the general public, but of physicians and chemists as well. The time was when legal lore was filled with Latin quotations, but one notices little or it practised on the public in these days. Let the medical world get down to business and rechristen its drugs, and make its methods understandable to the average mortal. When all is said and done it is largely a pose, and there is no good reason why living languages should not take the place of dead ones, at least so far as a physician, a chemist and patient are concerned. —*Saturday Night*, March 12, 1921.

*Editor, The Canadian Journal of Medicine and Surgery,
Toronto.*

MY DEAR MR. EDITOR: I have looked over the clipping from *Saturday Night*, which you enclosed, and which I had previously overlooked through having acquired after long experience the habit of setting the wholesome example to the public of not reading a layman's inane lucubrations on matters medical. The "further foolishness" of attempting to make up for professional ignorance by editorial omniscience has never proved a pronounced success. I have nothing to say in defence of professional carelessness; but I should like to remark in passing that in all walks of life in recent times there appears to have developed a lessened or relaxed sense of individual responsibility which must surely be the outcome of some defect in our education in morals—perhaps the absence of religious instruction in the schools and homes. Again, I should like to point out that medical experience teaches that at times there seems to be a fatality in the incidence of fatalities, and that

occasionally mishaps and calamities occur in spite of the utmost precautions and the best safety devices, recalling Martial's epigram, *Nullo fata loco possis excludere*. Or as Livy says, more pertinent to this point, perhaps, *Fermé fugiendo in media fata ruil*.

The commentator in *Saturday Night* writes *currente calamo* and discloses the fact that his organ of mind is in a similar state of flux, "darkening counsel by words without knowledge." This is evident in his statement that Neodiarsenol and Diarsenol, which, if I remember right, were asked for *cirâ voce*, and no prescription in Latin written, and no confusing telephone intervened, are "drugs of an exactly opposite effect," and that there is a "twisting of medical terms" in the use of barium sulphurette and barium sulphate which he ignorantly informs the ignorant public are "medical terms." He correctly says, however, what must be obvious to the meanest understanding, that "the opportunities for error in drugs of similar names but dissimilar action is greatly augmented by the use of the telephone." If instead of this platitude he had given us a list of the terms likely to be confounded it would have served a better purpose and perhaps saved some space.

The fundamental error underlying his view is the assumption that scientific and technical terms should be made intelligible to the man without education for whose use they are not at all designed. The smattering of knowledge of scientific terms vulgarised by quacks and charlatans for their own ends should be universally recognized as being no less polluted and dangerous than its source. The only safety is for the layman to recognize his own ignorance, which, in matters medical, is unfathomably profound, and so guard himself against the certainty of error masquerading in the garb of truth—which, in reality, is naked—leading him to destruction, for in no other sphere has the maxim "a little learning is a dangerous thing" a more forceful application.

The sooner "the man on the street" learns to know his ignorance (*quis nescit ignorare ignorat scire*) which would teach him that he cannot have a *sound* opinion on most subjects, the better for him; and when the *ex-cathedra* editor, of omniscience, ceases to "deliver brawling judgments unashamed on all things

all day long" the better for all. Most medical terms have nothing to do with drugs; and the names of most drugs are botanical terms, finding only an incidental or accidental use in medicine; while their active principles belong to the Science of Chemistry, as do the inorganic or organic alkaloids, salts and substances they go to form, and there is no reason why they should be made legible and intelligible to the uninitiated and the unlearned.

The element barium (*βαρύς*=heavy) does not exist free in Nature but is found in the form of its various salts, and has many uses in the Arts but is scarcely ever used medicinally. The sulphate is called heavy spar; the carbonate, witherite. It is safe to teach that all the salts of barium, save the sulphate, are toxic. The soluble salts are all poisonous; and some of the insoluble ones may be partly converted into the chloride in the stomach and thus become so. They have practically no internal use medicinally, though the iodide has been employed rarely instead of the iodide of potash as a so-called alterative; and externally barium sulphide or sulphurette has been employed as a depilatory, most often, possibly, in proprietary preparations. When so used it is wiser not to entrust their application to the patient. In prescribing and dispensing them all the precautions usual in the case of poisons should be observed, and the distribution of them safeguarded by the employment of warning wrappers on the bottles, packages, etc., put into the hands of the public, in whom the profoundest ignorance of drugs must be assumed, and will be justified, no matter what their station in life.

You ask me why prescriptions should be written in Latin, and I reply:

1st. It is a universal language, and prescriptions written in it may be read and dispensed (if pharmacopœial) in any part of the world.

2nd. It is in a sense secret or occult and therefore possesses, for the remedy the element of suggestion (*ignotum pro mag-nifico*) and expectant attention, and the fruit of faith.

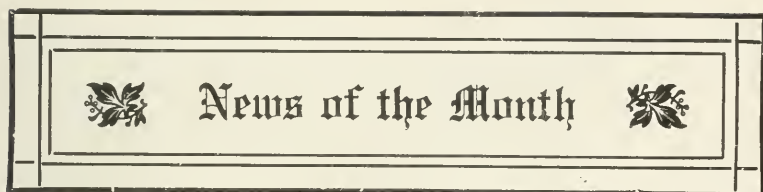
3rd. The ignorance of the patient as to what he is taking, redounds to his advantage furthermore that he does not exercise a foregone and prejudiced opinion, usually based upon

absolutely false impressions, as to what ought to be the effects of the drug and the time of their manifestation, which would wreck the prospects of the preceding proposition.

4th. He does not on subsequent occasions of supposedly similar sufferings prescribe for himself or for his afflicted neighbours and friends to their detriment and damage, which involves all the evils of self-drugging and charlatanry.

5th. When the patient attempts to read it he sometimes becomes convinced of the truth of the maxim, equally applicable to law, *mutatis mutandis*, that the man who is his own doctor, *even after forty*, generally has a fool for a patient. The prescription should remain in the possession of the druggist whose authority it is for dispensing its contents. And if the directions be in Latin he should transcribe them, if possible, in the language of the patient, who will then be able to see if they agree with what the physician has told him, and have any mistake corrected, without running the risk of misinterpreting them himself. English is very often, in fact more often than Latin, badly written. The greater care necessary in writing Latin makes the writer more careful, and the greater difficulty in reading it makes both the writer and the reader more careful which conduces to legibility. But there is no salvation from the fool and the indifferently careless who indulge in homicidal hand-writing, except the refusal of those who compound medicines to put up anything they cannot read clearly and intelligibly, and the druggist then becomes a synergist of the physician in securing safety. If barium sulphate in the case in question had been written in its Latin form, and in Latin, there would have been much less danger of mistaking it for barium sulphurette or sulphide, as unfortunately happened; and I do not apprehend that the druggist made the mistake of the newspaper censor of supposing the prescription was written or spoken in the Latin. Those who write in Latin, however, should be careful to write each word in full, for the use of abbreviations or syncopated terms is equally fatal in either tongue. Yours truly,

I. H. CAMERON.



ACTION AGAINST DR. ARCHER DISMISSED

MR. JUSTICE SUTHERLAND has dismissed the action of Mr. and Mrs. Isaac Waldron, of Port Perry, against Dr. Robert Archer of the same place, whom they sued for \$20,000 for alleged malpractice. The plaintiffs are to pay the costs of the action.

It was clear from the evidence, his Honor stated, that the defendant was possessed of more than ordinary skill, and performed the operation in an expeditious and skilful manner.

On Sept. 12th and 19th Dr. Archer advised Mrs. Waldron to have an operation, but she refused. Summoned hurriedly on the evening of Sept. 25th he saw that an immediate operation was necessary if her life was to be saved. With the aid of his wife, who had been a professional nurse; his brother, also a doctor, and another doctor, the operation was successfully performed in the patient's home by the light of an oil lamp. Owing to the conditions under which the work was done, and the speed with which the wound had to be closed, a "wipe" was left in the wound, and had to be removed by a subsequent operation. It was this that gave rise to the action for alleged malpractice.

Justice Sutherland stated that the failure to remove the sponge could not be regarded as actionable negligence or as more than accidental.

THE following announcement was recently sent out by the Ontario Provincial Board of Health to the profession throughout the province:—

"You are no doubt aware that the Provincial Board of Health has instituted a vigorous campaign against venereal diseases. In this connection, the Board some time ago deter-

mined to manufacture Salvarsan (606) in order to assist those cases of syphilis who are unable to pay for their treatment.

After considerable difficulty a license was obtained from the Dominion Government giving the Board power to manufacture this product, which is called Phenarsenamine. This license, however, does not allow the drug to be sold to physicians, but allows the Board to give it free of charge to hospitals, venereal disease clinics, Government institutions and local medical officers of health for the free treatment of patients who are unable to pay.

The phenarsenamine (606) has been thoroughly tested out, found satisfactory, and is now ready for distribution with the foregoing restrictions.

Patients unable to pay in or near the large centres may now be treated with phenarsenamine at the venereal disease clinics (if present) or in the public wards of hospitals, and the drug may be obtained from the Provincial Board of Health through the local medical officer of health. In the smaller towns and rural districts the M.O.H. has been given authority to requisition for the phenarsenamine when satisfied that the drug is required for the free treatment of a patient. The Board has arranged to send a specially trained medical officer to any part of Ontario where needed to demonstrate the method of preparation and administration and leave with the local M.O.H. or the physician detailed by him the necessary apparatus to carry on the treatment. This apparatus will be considered to be on loan to the municipality and should be returned by the M.O.H. when the treatment has been completed.

Any other expense in connection with the treatment of venereal cases who are unable to pay should be borne by the municipality concerned unless there is a venereal disease clinic under Government supervision in operation. (See Section 14 of the V.D. Prevention Act.) The Provincial Board at the present time is only able to supply free phenarsenamine and the apparatus for its administration.

The phenarsenamine is made up in ampoules in the following quantities: 0.2 grams, 0.3 grams, 0.4 grams, *0.5 grams, 2.0 grams, 3.0 grams, 4.0 grams. The three last-named for convenience—if several doses are to be given.

* 0.5 grains should not be used except in the case of a robust man whose tolerance of the drug has been well established.

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